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Malaria Acquired in Haiti — 2010

On January 12, 2010, a 7.0 magnitude earthquake struck Haiti, which borders the Dominican Republic on the island of Hispaniola. The earthquake's epicenter was 10 miles west of the Haiti capital city of Port-au-Prince (estimated population: 2 million). According to the Haitian government, approximately 200,000 persons were killed, and 500,000 were left homeless (*1*). Malaria caused by *Plasmodium falciparum* infection is endemic in Haiti, and the principal mosquito vector is *Anopheles albimanus*, which frequently bites outdoors. Thus, displaced persons living outdoors or in temporary shelters and thousands of emergency responders in Haiti are at substantial risk for malaria. During January 12 –February 25, CDC received reports of 11 laboratory-confirmed cases of *P. falciparum* malaria acquired in Haiti. Patients included seven U.S. residents who were emergency responders, three Haitian residents, and one U.S. traveler. This report summarizes the 11 cases and provides chemoprophylactic and additional preventive recommendations to minimize the risk for acquiring malaria for persons traveling to Haiti.

Of the seven emergency responders, six were U.S. military personnel. Among the six, four cases were uncomplicated and treated locally in Haiti. Two other patients were moderately to seriously ill and transferred to the United States for intensive care; one required intubation and mechanical ventilation for acute respiratory distress syndrome. All are expected to make a full recovery.

All six military personnel had been provided oral chemoprophylaxis with doxycycline before departure from the United States and personal protective equipment (e.g., insect repellent and insecticide-treated netting and uniforms) after arrival in Haiti. Of the 11 total patients, chemoprophylaxis was indicated for the seven emergency responders and the lone U.S. traveler. Six of these eight patients (including the two hospitalized military personnel) reported nonadherence to the recommended malaria medication regimen. Adherence status was unknown for the remaining two patients.

Three cases occurred in Haitian residents who traveled to the United States, including one Haitian adoptee. The number of U.S. malaria cases imported from Haiti likely is underestimated because typically not all cases are reported to CDC.

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Editorial Note

In 2008, a total of 1,298 cases of malaria in the United States were reported provisionally to CDC, and 527 (40.6%) were caused by *P. falciparum*; all but two of the malaria cases were imported (CDC, unpublished data, 2009). Most imported cases are in travelers returning to the United States from areas in Africa, Asia, and the Americas where malaria transmission is known to occur (*2*). Of the four *Plasmodium* species that routinely infect humans (*P. falciparum*, *P. vivax*, *P. malariae*, and *P. ovale*), *P. falciparum* causes the most severe disease and highest mortality and is the predominant species in Haiti (*3,4*). Information regarding the incidence of malaria in Haiti is limited. Historically, malaria transmission peaks in Haiti after the two rainy seasons, with a primary peak during

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November–January and a secondary peak during May–June. Although each year Haiti reports approximately 30,000 confirmed cases of malaria to the Pan American Health Organization, as many as 200,000 cases might occur annually. One population-based survey in 2006 in the Artibonite Valley, located 75 miles north of Port-au-Prince, found an overall prevalence of *P. falciparum* infection of 3.1% (14.2% in febrile and 2.1% in nonfebrile persons) (*4*).

Prompt diagnosis and treatment of malaria as well as chemoprophylaxis when appropriate are critical. Recommendations for antimalarials for treatment and prevention are based on information on parasite drug susceptibility for a specific geographic setting. In Haiti, the first-line treatment for malaria is chloroquine. No evidence exists of clinical failure of chloroquine treatment in persons with *P. falciparum* infection acquired in Hispaniola, nor has chloroquine prophylaxis failure been documented in travelers. However, one published study found five of 79 (6.3%) *P. falciparum* isolates collected in the Artibonite Valley in Haiti in 2006 and 2007 carried a mutation associated with parasite resistance to chloroquine (*5*). Although the findings do not serve as a basis for prophylaxis and treatment policy change, they do point out the need for heightened awareness of potential failure of chloroquine treatment or prophylaxis in persons in Haiti or returning from Haiti.

Persons traveling to Haiti should receive chemoprophylaxis with one of the following medications: atovaquone-proguanil, chloroquine, doxycycline, or mefloquine (*6*). If preventive medications are started <1 week before departure, or while already in Haiti, either atovaquone-proguanil or doxycycline are recommended. Use of weekly chloroquine requires receiving the initial dose 1 week before departure, and use of weekly mefloquine requires receiving the initial dose 2 weeks before departure. Mosquito avoidance measures should be taken, such as using mosquito repellent, wearing protective clothing, and sleeping under an insecticide-treated mosquito net. Chemoprophylaxis, although highly effective in preventing malaria, is not 100% effective. Therefore, if fever develops in persons taking chloroquine or other antimalarials for chemoprophylaxis, they still should be evaluated for malaria infection with a diagnostic test.

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What is already known on this topic?

Malaria caused by *Plasmodium falciparum* infection is endemic in Haiti, where the January 12 earthquake and resultant living conditions have placed many displaced residents and emergency responders at substantial risk for malaria.

What is added by this report?

This report summarizes 11 cases of malaria from Haiti reported to CDC and outlines recommendations for appropriate malaria chemoprophylaxis for persons traveling to Haiti.

What are the implications for public health practice?

Adherence to preventive chemoprophylaxis recommendations and appropriate personal protective measures can lower malaria risk, and prompt diagnosis and treatment of malaria in travelers to Haiti and persons in Haiti can improve their outcomes.

CDC currently recommends microscopic examination of blood smears for malaria diagnosis. Three negative malaria smears spaced 12–24 hours apart are needed to rule out malaria. However, microscopy capacity in Haiti is limited at this time. A diagnostic option frequently used in emergency settings in areas with high prevalence of malaria is a rapid diagnostic test based on antigen detection. However, if laboratory diagnosis of malaria is not possible, presumptive treatment based on clinical suspicion of malaria (e.g., unexplained fever) should be given. Rapid diagnostic tests for malaria can remain positive up to 3 weeks after treatment and should not be used to assess treatment failure in a patient with malaria.

Persons with laboratory-confirmed *P. falciparum* malaria acquired in Haiti and treated in the United States and emergency responders treated in the field should receive treatment according to CDC guidelines (*7*). Uncomplicated malaria can be treated with one of the following regimens: chloroquine, artemether-lumefantrine, atovaquone-proguanil, or the combination of quinine and doxycycline, tetracycline, or clindamycin. In patients with confirmed malaria who report adherence to chemoprophylaxis in Haiti, a change to a different drug than that taken for chemoprophylaxis is recommended for treatment. Clinicians should consider switching patients with uncomplicated, laboratory-confirmed malaria from chloroquine treatment to other recommended drugs after any indication of poor response to chloroquine such as increasing parasite density 24 hours after starting treatment, persistent parasitemia 48 hours after starting treatment, or clinical deterioration. Severe malaria requires treatment with intravenous quinidine and one of the following: doxycycline, tetracycline, or clindamycin. Intravenous artesunate also is available from CDC for use in the United States as part of an investigational drug protocol. If treating severe malaria in a responder in the field, treatment should be initiated with available medications and consideration given to immediate medical evacuation.

In Haiti, residents with malaria should be treated in accordance with that country's national treatment guidelines. First-line treatment for uncomplicated malaria in Haiti is chloroquine. First-line treatment for severe malaria in Haiti is intravenous or intramuscular quinine.

CDC continues to monitor the malaria situation in Haiti, including any reports of possible chloroquine prophylaxis or treatment failures in those returning from Haiti. Medical providers should contact the CDC Malaria Branch clinician on call (770-488-7100) for clinical consultations and to discuss cases of apparent chloroquine treatment or prophylaxis failures and testing of parasites at CDC for resistance markers. Additional information on malaria is available at http://www.cdc.gov/malaria.

References

1. Information Center of the Haitian Government [French]. February 23, 2010. Available at http://www.haitiseisme2010.gouv.ht. Accessed March 2, 2010.
2. CDC. Malaria surveillance United States, 2007. MMWR 2009;58(No. SS-2).
3. Pan American Health Organization. Roll back malaria in Meso America: report on the meeting held in the Dominican Republic with the participation of the Central American countries, Mexico, Haiti, and the Dominican Republic. San Pedro de Macoris; November 20–24, 2000. Available at http://www.paho.org/common/display.asp?lang=e&recid=4921. Accessed March 2, 2010.
4. Eisele TP, Keating J, Bennett A, et al. Prevalence of *Plasmodium falciparum* infection in rainy season, Artibonite Valley, Haiti, 2006. Emerg Infect Dis 2007;13:1494–6.
5. Londono BL, Eisele TP, Keating J, et al. Chloroquine-resistant haplotype *Plasmodium falciparum* parasites, Haiti. Emerg Infect Dis 2009;15:735–40.
6. CDC. Health information for travelers to Haiti. Atlanta, GA: US Department of Health and Human Services, CDC; 2010. Available at http://wwwnc.cdc.gov/travel/destinations/haiti.aspx. Accessed March 2, 2010.
7. CDC. Malaria treatment (United States). Atlanta, GA: US Department of Health and Human Services, CDC. Available at http://www.cdc.gov/malaria/diagnosis_treatment/treatment.html. Accessed March 2, 2010.

Identifying Infants with Hearing Loss — United States, 1999–2007

Congenital hearing loss affects two to three infants per 1,000 live births (*1*). Undetected hearing loss can delay speech and language development. A total of 41 states, Guam, and the District of Columbia have statutes or regulatory guidance to identify infants with hearing loss. All states and U.S. territories also have established Early Hearing Detection and Intervention (EHDI) programs, which embody evidence-based public health policy for addressing infant hearing loss (*2,3*). EHDI programs help ensure that newborns and infants are screened and receive recommended follow-up through data collection and outreach to hospitals, providers, and families. To determine the status of efforts to identify newborns and infants with hearing loss, CDC analyzed EHDI surveillance data from 1999–2007. Differences in how data were reported and collected limit comparability between 1999–2004 and 2005–2007 data; however, available data indicated an increase in infants screened from 46.5% in 1999 to 97.0% in 2007. In addition, the number of infants documented with hearing loss in 2007 increased by nearly 500 infants among the same 21 states reporting data in 2001 (1,736 identified in 2001 versus 2,212 in 2007). These findings demonstrate progress toward achieving benchmarks for screening, evaluation, and intervention and document the continued need to ensure infants receive recommended services in a timely manner.

Early identification of infants with hearing loss is endorsed by the Joint Committee on Infant Hearing, whose members include national professional and advocacy organizations (*4*). Recommended national EHDI benchmarks include the following: hearing screening no later than age 1 month, diagnostic audiologic evaluation no later than age 3 months (for those infants not passing the screening), and enrollment in early intervention no later than age 6 months (for those identified with a hearing loss).

For 1999–2004, the Directors of Speech and Hearing Programs in State Health Welfare Agencies (DSHPSHWA), a national organization that promotes public health programs targeting the diagnosis and treatment of communication disorders, collected data from states and territories and shared them with CDC. Data for 2005–2007 were obtained directly by CDC through a detailed survey sent to the directors of state and territorial EHDI programs. Unlike the DSHPSHWA data, which included estimates by programs, the CDC survey for 2005–2007 (the most recent data available) required that data be recorded or documented within program tracking systems. Aggregate estimates from hospitals and providers that were included in the DSHPSHWA data could not be used in response to the CDC survey. CDC also asked that state and territorial respondents report aggregate data for 2005–2007 that reflected the screening, diagnostic, and intervention status of every birth during that period. For infants for whom the receipt of services could not be documented, respondents were asked to report the reason (e.g., infant death or parental refusal). Infants were considered lost to follow-up (LFU) if they did not receive recommended follow-up diagnostic or intervention services or lost to documentation (LTD) if they received services without the results being reported to the EHDI program. Although strategies used to target LFU and LTD differ, these two categories are grouped together because it is not possible for programs to differentiate between infants who did not receive services and those whose receipt of services were not reported (*5*).

Data for 1999–2007 were requested from all 50 states, the District of Columbia, Guam, the Northern Mariana Islands, Puerto Rico, and the U.S. Virgin Islands. The number of respondents ranged from 22 in 1999 to 50 in 2007. Some respondents provided partial data or were unable to provide any data for one or more reporting years, so the actual number of states and territories reporting data for specific indicators varied for each year. In 1999, a total of 22 states and territories estimated that 660,639 (46.5%) of infants among total births were screened for hearing loss. By 2007, 47 states and territories reported that 3,345,629 (97.0%) infants were screened; three states in 2007 reported incomplete screening and follow-up data and were not included in the analysis. In 1999, eight states and territories estimated that 3,924 (48.2%) infants who did not pass the screening failed to receive a diagnostic evaluation and were therefore LFU/LTD. In 2005, the first year CDC collected data, 44 states and territories reported that 64.0% (38,411) of infants not passing the final or most recent screening did not receive recommended follow-up services and were therefore LFU/LTD. In 2007, LFU/LTD was reported at 46.1% (28,112) by 44 states and

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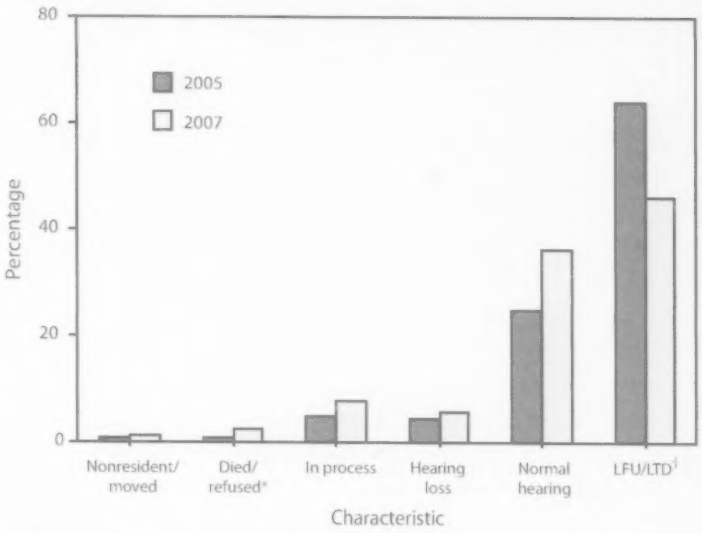
territories, representing a decrease of more than 17 percentage points from 2005 (Figure). The number of infants identified with hearing loss increased from an estimated 282 (1.1 per 1,000 screened) reported by nine states and territories in 1999 to 3,430 (1.2 per 1,000 screened) documented cases reported by 44 states and territories in 2007 (six states and territories responding to the 2007 survey were unable to provide this information). The overall number of infants with hearing loss enrolled in early intervention in 1999 was not reported to DSHPSHWA. In 2007, a total of 43 states and territories documented that 60.8% of infants with hearing loss were enrolled in early intervention by age 6 months.

The percentage of infants who were documented to be screened before age 1 month increased from 80.1% in 2005 to 85.4% in 2007, based on data from 46 states and territories. The percentage of infants receiving recommended diagnostic follow-up before age 3 months increased from 54.0% in 2005 to 66.4% in 2007, based on data from 44 states and territories. The percentage of infants receiving early intervention who were enrolled before 6 months increased from 57.0% in 2005 to 60.8% in 2007, based on data from 44 states and territories in 2005 and 43 in 2007 (Table).

FIGURE. Status of infants who did not pass initial hearing screening — United States, 2005–2007



* Infant died or parents refused the screening.
† Lost to follow-up/lost to documentation.

Reported by

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Editorial Note

Since the organized collection of data started in 2000 (for year 1999), demonstrated progress has been made in identifying and providing early intervention services to infants with hearing loss. For example, the reported mean percentage of infants screened for hearing loss increased from 46.5% in 1999 to 97.0% in 2007. The increase in screening most likely is due to a combination of several factors: 1) implementation of new or revised requirements to screen infants for hearing loss (within some states), 2) improvements in screening and diagnostic technology, 3) increased reporting by hospitals and other providers of hearing screening results, 4) improvements in data collection and state and territorial EHDI tracking and surveillance systems, 5) increased awareness about the importance of screening infants for hearing loss, 6) increased follow-up efforts by state EHDI programs, and 7) support by national agencies and organizations.

Although some data reported for 1999–2004 were estimated, the 2005–2007 data reflect results states and territories could document, providing a more accurate summary of EHDI-related efforts. Now that >95% of U.S. infants can be documented as having their hearing screened, remaining challenges include ensuring timely diagnostic evaluation for those who do not pass the screening and enrollment in early intervention for those with diagnosed hearing loss. In 2005, >60% of infants who had not passed the final or most recent screening were LFU/LTD. Some of those infants might have received audiologic evaluations, but the results were not reported to the EHDI program (i.e., undocumented evaluation) and their status could not be determined from available data. By 2007, LFU/LTD among infants not passing the final or most recent screening had decreased to approximately 46%. EHDI programs such as those in Massachusetts and Colorado, which often actively follow up with families and providers and reported LFU/LTD in 2007 of 5.6% and 6.4%, respectively, are good examples for other programs trying to improve overall follow-up rates. (*6,7*).

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TABLE. Number and percentage of infants screened for hearing loss, diagnosed, and enrolled in early intervention, and number of states responding — United States, 1999–2007

	Screened				Diagnosed						Infants with hearing loss				
	Total		Before age 1 mo		Total*		Before age 3 mos†		LFU/LTD§		Total	Enrolled in EI¶		Enrolled in EI before age 6 mos	
Year	No.	(%)	No.	(%)	No.	(%)	No.	(%)	No.	(%)	No.	No.	(%)	No.	(%)
1999	660,639 (22**)	(46.5)	N/A††		N/A		4,221 (8)	(51.8)	3,924 (8)	(48.2)	282 (9)	N/A		N/A	
2000	1,496,014 (44)	(52.1)	N/A		10,124 (23)	(56.3)	3,931 (11)	(77.6)	7,859 (23)	(43.7)	855 (25)	590 (17)	(83.7)	446 (17)	(75.6)
2001	2,115,869 (48)	(65.4)	N/A		11,901 (27)	(55.7)	4,622 (14)	(78.2)	9,476 (27)	(44.3)	2,541 (35)	891 (27)	(65.0)	579 (24)	(69.7)
2002	2,941,115 (47)	(82.9)	N/A		17,254 (35)	(40.4)	7,899 (26)	(69.5)	25,469 (35)	(59.6)	2,553 (37)	1,137 (30)	(64.0)	531 (25)	(64.9)
2003	3,417,964 (50)	(88.1)	N/A		20,083 (37)	(55.2)	(10,671) (31)	(81.7)	16,309 (37)	(44.8)	2,899 (44)	1,702 (38)	(65.6)	1,064 (35)	(67.4)
2004	3,496,452 (49)	(91.8)	N/A		25,376 (41)	(48.7)	14,909 (36)	(75.7)	26,704 (41)	(51.3)	3,600 (47)	1,859 (40)	(65.3)	1,277 (38)	(69.9)
2005	3,231,594 (48)	(94.2)	2,471,554 (46)	(80.1)	17,691 (44)	(29.5)	9,556 (44)	(54.0)	38,411 (44)	(64.0)	2,634 (44)	1,522 (44)	(57.8)	868 (44)	(57.0)
2006	3,129,585 (49)	(95.2)	2,706,029 (49)	(86.5)	23,024) (47)	(34.1)	10,831 (47)	(47.0)	32,189 (47)	(47.7)	3,261 (47)	1,703 (45)	(55.4)	973 (45)	(57.1)
2007	3,345,629 (47)	(97.0)	2,709,244 (46)	(85.4)	25,696 (44)	(42.2)	17,052 (44)	(66.4)	28,112 (44)	(46.1)	3,430 (44)	2,046 (43)	(60.8)	1,243 (43)	(60.8)

SOURCES: 1999–2004: Directors of Speech and Hearing Programs in State Health and Welfare Agencies Annual Survey; data reported on this survey often were estimated. 2005–2007: CDC Early Hearing Detection and Intervention Annual Hearing Screening and Follow-up Survey.

* Diagnosis data for 1999–2004 refer to the number of infants not passing the hearing screening that were estimated to have received a diagnostic audiologic evaluation. Diagnosis data for 2005–2007 refer to the number of infants reported as not passing the final or most recent hearing screening that were documented to have been diagnosed with a hearing loss or found to have normal hearing (i.e., no hearing loss).

† During 1999–2004, the number of respondents reporting data about infants diagnosed before age 3 months was less than the number reporting overall diagnostic data.

§ Loss to follow-up/documentation.

¶ Early intervention. In 1999, data only were requested about the number of infants receiving a diagnostic evaluation before age 3 months and the number of infants enrolled in EI before age 6 montths. No data were requested about the overall number that received a diagnostic evaluation or enrolled in EI. Early intervention data for 2005–2007 includes children only receiving Part C services and those only receiving non-Part C services.

** Number of responding states (including the District of Columbia and Guam).

†† Data not available.

The findings in this report are subject to at least three limitations. First, the methods and definitions used to collect data for 1999–2004 differed from those used to collect data for 2005–2007. For 2005–2007, a more standardized methodology was used that focused on collecting complete, documented data. This limits comparability between the 1999–2004 and 2005–2007 data, especially of the diagnostic data. Second, some states and territories were able to provide only limited data in one or more reporting years. Third, EHDI programs are designed to detect hearing losses at a threshold of 30–40 dB. The prevalence of all forms of hearing loss among children, including mild degrees of loss that fall below the screening threshold of detection and those that are either progressive or late-onset, is higher than that detected through newborn hearing screening (*8,9*).

Recent data indicate progress has been made in screening infants for hearing loss, reducing LFU/LTD, and raising enrollment in early intervention. However, challenges remain in providing and documenting receipt of recommended EHDI services. To address these challenges, federal funds are being used to enhance EHDI surveillance systems to capture more complete data, increase education and outreach efforts, and, in some states and territories, employ follow-up coordinators to ensure infants receive services. At the federal level, CDC, the Healthcare

What is already known on this topic?

During the past decade, screening and diagnosis of hearing loss in infants and the reporting of this information have expanded nationally.

What is added by this report?

The requirement for state and territorial programs to report results based on documented data, rather than estimated, has led to more accurate data and assessment of efforts to identify infants with hearing loss; this documented data has shown a large increase in screening rates and indicated that challenges remain in ensuring infants receive recommended follow-up diagnostic and early intervention services.

What are the implications for public health practice?

Continued expansion of follow-up efforts by Early Hearing Detection and Intervention (EHDI) programs and data reporting by providers, data linkage and integration, and information sharing between providers and EHDI programs will be vital to further reduce loss to follow-up and to document program effectiveness in identifying infants with hearing loss and ensuring these infants receive appropriate early intervention services.

Information Technology Standards Panel, and other agencies are exploring how electronic health records can facilitate EHDI data collection and reporting and working to develop data reporting standards.

Acknowledgments

This report is based, in part, on data reported by EHDI programs in U.S. states, the Commonwealth of the Northern Mariana Islands, the District of Columbia, Guam, Palau, and the U.S. Virgin Islands.

References

1. Vohr B. Overview: infants and children with hearing loss—part I. Ment Retard Dev Disabil Res Rev 2003;9:62–4.
2. US Preventive Services Task Force. Universal screening for hearing loss in newborns: US Preventive Services Task Force recommendation statement. Pediatrics 2008;122:143–8.
3. Brownson RC, Chriqui JF, Stamatakis KA. Understanding evidence-based public health policy. Am J Public Health 2009; 99:1576–83.
4. Joint Committee on Infant Hearing. Year 2007 position statement: principles and guidelines for early hearing detection and intervention programs. Pediatrics 2007;120:898–921.
5. Mason CA, Gaffney M, Green DR, Grosse SD. Measures of follow-up in early hearing detection and intervention programs: a need for standardization. Am J Audiol 2008;17:60–7.
6. Liu CL, Farrell J, MacNeil JR, Stone S, Barfield W. Evaluating loss to follow-up in newborn hearing screening in Massachusetts. Pediatrics 2008;121:e335–43.
7. Christensen M, Thomson V, Letson GW. Evaluating the reach of universal newborn hearing screening in Colorado. Am J Prev Med 2008;35:594–7.
8. Niskar AS, Kieszak SM, Holmes A, Esteban E, Rubin C, Brody DJ. Prevalence of hearing loss among children 6 to 19 years of age: the Third National Health and Nutrition Examination Survey. JAMA 1998;279:1071–5.
9. Ross DS, Visser SN, Holstrum WJ, Qin T, Kenneson A. Highly variable population-based prevalence rates of unilateral hearing loss following the application of common case definitions. Ear Hear 2010;31:126–33.

Severe Isoniazid-Associated Liver Injuries Among Persons Being Treated for Latent Tuberculosis Infection — United States, 2004–2008

Since the 1960s, 6 to 9 months of isoniazid (INH*) has been the mainstay of treatment for latent tuberculosis infection (LTBI), but its application has been limited by concerns about the toxicity of INH and the long duration of treatment. To quantify the frequency of severe adverse events (SAEs) associated with LTBI treatment and to characterize the clinical features of affected patients, in January 2004 CDC began a national project to monitor SAEs associated with treatment for LTBI. State health departments were encouraged to report SAEs associated with any LTBI treatment regimen to a passive surveillance system. This report summarizes the results for 2004–2008, when 17 SAEs in 15 adults and two children (aged 11 and 14 years) were reported. All patients had received INH therapy and had experienced severe liver injury. Five patients, including one child, underwent liver transplantation. Five adults died, including one liver transplant recipient. These findings underscore the risk for an idiosyncratic drug-induced reaction in patients of any age treated with INH, including those with or without a putative predictor for INH-associated liver injury. Patients receiving INH for LTBI therapy should be monitored according to American Thoracic Society (ATS)/CDC recommendations because of the risk for drug-induced hepatoxicity (*1*,*2*). Providers should counsel patients to terminate INH therapy promptly and seek medical attention if they experience signs and symptoms of illness.

An SAE was defined as any drug-associated reaction resulting in a patient's hospitalization or death after at least 1 treatment dose for LTBI. Public and private health-care providers notified local health departments of SAEs. Local health departments then submitted standardized reports to CDC through their state health departments. Standardized reports included demographic information, LTBI treatment regimen, dates of treatment initiation and cessation, dates of hospitalization, results of testing for antibodies to viral hepatitis, clinical outcome, and dates of liver transplantation or death. Although the surveillance system was passive, CDC was available upon invitation to conduct extended onsite investigations. Investigations included medical record reviews and interviews of patients or their proxies and medical providers.

During 2004–2008, CDC received 21 reports of LTBI treatment–associated adverse events; however, four did not meet the SAE surveillance definition and were excluded from this analysis. All 17 patients with events meeting the SAE definition had received INH therapy and experienced liver injury. Of the 17 patients, two were children aged <15 years (Table 1). For the 15 affected adults, the median age was 39 years (range: 19–63 years). The SAEs were diagnosed between the second and ninth month of therapy, with the exception of one adult whose regimen spanned 17 months because of repeated treatment interruptions and who was diagnosed with an SAE in the seventeenth month. Sixteen patients tested negative for antibodies to hepatitis A (IgM anti-HAV), hepatitis B (antibody to hepatitis B core antigen) and hepatitis C (anti-HCV); one adult had pretreatment coinfection with hepatitis C virus (HCV) and human immunodeficiency virus (HIV) (Table 1). Of 17 patients, five underwent liver transplantation, including one child. Five of 15 adults died, including a liver transplant recipient.

Onsite clinical investigations

For 10 SAEs, state health departments invited CDC personnel to conduct onsite investigations (Table 2, Table 3). All 10 affected patients had indications for LTBI treatment, were prescribed INH within the recommended dosage range, and took the medication as prescribed. Prescribers followed ATS/CDC guidelines for monthly clinical monitoring of all 10 patients† (*1*,*2*). Pretreatment serum aminotransferase concentrations were normal for five adults

* Isonicotinylhydrazine.

† Monthly clinical monitoring (including a physical examination) for the signs and symptoms of adverse events is recommended by ATS and CDC for all LTBI treatment patients (*1*,*2*). Existing guidelines suggest that patients who have HIV infection, patients who have chronic liver disease, pregnant women, women in the immediate postpartum period (≤3 months of delivery), and patients who use alcohol regularly should be considered for baseline laboratory hepatic testing. Routine laboratory testing is indicated for patients whose baseline testing is abnormal and other persons at risk for hepatic disease (*1*,*2*).

TABLE 1. Reported severe adverse events (N = 17) associated with isoniazid (INH*) treatment for latent tuberculosis infection (LBTI), by patient characteristics — United States, 2004–2008

Characteristic	No.
Age group (yrs)	
≤15	2
16–35	5
>35	10
Sex	
Male	6
Female	11
Race/Ethnicity	
Hispanic	8
Black, non-Hispanic	1
White, non-Hispanic	8
Country of birth	
United States	10
Foreign-born	7
Duration of INH treatment (days)	
Median	104
Range	28–499†
Period from initiation of INH treatment to severe adverse event symptoms (days)	
Median	109
Range	56–502†
Results of testing for viral hepatitis§	
Negative	16
Abnormal	1
Outcome	
Recovered	8
Had liver transplant	5
Died	5¶

* Isonicotinylhydrazine.
† Includes one patient who received intermittent (>9 months) INH treatment for LBTI.
§ Includes testing to detect antibodies to hepatitis A (IgM anti-HAV), hepatitis B (antibody to hepatitis B core antigen) and hepatitis C (anti-HCV). One adult patient had pretreatment coinfection with hepatitis C virus and human immunodeficiency virus; testing for hepatitis A and B antibodies showed the presence of antibodies consistent with the patient's history of previous vaccination.
¶ Includes one patient who died immediately after receiving a liver transplant.

TABLE 2. Results of onsite case investigations (n = 10) of severe adverse events (SAEs) associated with isoniazid (INH*) treatment for latent tuberculosis infection (LTBI), by case characteristics — United States, 2004–2008

Characteristics	No.
Treated outside of a public health clinic	2
Had clinical monitoring monthly	10
Had laboratory monitoring of serum aminotransferase levels monthly	2
Results of baseline testing of serum aminotransferase†	
Within normal limits	5
Abnormal	0
Never tested	5
Period from SAE symptom onset to discontinuation of INH (days)	
≤2	1
3–6	1
7–10	4
11–14	0
15–20	2
>20	2
SAE diagnosis by different clinician than the one who prescribed INH	7
Serum aspartate aminotransferase (AST) measurement at SAE diagnosis (international units/liter [IU/L])§	
Median	2,200
Range	387–3,000
Serum alanine aminotransferase (ALT) measurement at SAE diagnosis (IU/L)§	
Median	2,192
Range	272–3,000
Putative risk factors for INH-induced liver injury¶	
None	3
Preexisting liver disease	1
Human immunodeficiency virus (HIV) infection	1
Concurrent injection-drug use	0
Concurrent alcohol consumption	3**
Pregnancy or ≤3 months after delivery	1
Older age	5
Concurrent use of non-acetaminophen-containing medications with hepatotoxic potential††	4

* Isonicotinylhydrazine.
† Includes one patient with HIV infection and four of five patients aged >35 years.
§ The American Thoracic Society and CDC recommend that, in the absence of symptoms, INH should be discontinued if aminotransferase values are five times the upper limit of normal. In the presence of symptoms, INH should be discontinued if aminotransferase values are three times the upper limit of normal. All patients were symptomatic upon presentation when aminotransferase values were examined. All values exceeded the recommended threshold.
¶ Predictors of INH-associated liver injury include preexisting liver disease, HIV infection, injection-drug use, concurrent alcohol consumption, pregnancy or the immediate postpartum period (≤3 months after delivery), older age, and concomitant administration of medications with hepatotoxic potential. Categories were not mutually exclusive.
** Upon prescription of INH, one patient without other predictors for liver injury had reported rare alcohol consumption (i.e., one drink per month). After SAE diagnosis, another patient reported weekly binge drinking with the intent to become intoxicated, and a third patient reported daily alcohol use during LTBI treatment. Neither of those patients reported alcohol use upon prescription of INH.
†† Medications with hepatotoxic potential included antiretroviral medications, a synthetic opioid medication, an antidepressant medication, a lipid-lowering agent, and an antihyperglycemic medication.

who underwent baseline testing (Table 2). Monthly aminotransferase monitoring was scheduled for two adults: one with HCV/HIV coinfection and another patient aged >35 years.

SAE symptoms began in the 10 patients 1–7 months after INH initiation (Table 3); for all patients, SAE diagnosis was based on symptoms rather than laboratory abnormalities. Seven patients initially experienced excess fatigue, nausea, or abdominal pain, but waited until the onset of jaundice before seeking medical attention. All patients had developed jaundice and markedly abnormal aminotransferase concentrations by the time of clinical evaluation. One patient had markedly abnormal aminotransferase concentrations 2 months before symptom onset, but the laboratory abnormalities were discovered incidentally during routine care by a provider who was unaware of LTBI treatment, and treatment continued until symptom onset. For seven of 10 patients, a provider other than the one who had prescribed the INH detected the SAE (Table 2).

TABLE 3. Clinical characteristics of cases (n = 10) in onsite investigations of severe adverse events (SAEs) associated with isoniazid (INH*) treatment for latent tuberculosis infection (LTBI) — United States, 2004–2008

Age (yrs)	Preexisting medical conditions	Putative predictors for liver injury†	Concurrent medications with hepatotoxic potential	Symptoms leading to SAE diagnosis	Period to SAE symptom onset after INH initiation (mos)	Period from INH initiation to SAE diagnosis (days)	Duration of therapy after symptom onset (days)	Outcome
11	None	None	Acetaminophen for 3 days to treat fever 1 mo before symptom onset	Fatigue, mild icterus, depression for 1–2 days, then jaundice, vomiting for 1 day	7	209	3	Liver transplant
19	Morbid obesity, migraine headaches	Concurrent excess alcohol consumption (about once weekly), reported after SAE diagnosis	Concurrent use of unidentified over-the-counter weight loss product; infrequent use of combination antiemetic and antidiarrheal medication after symptom onset	Diarrhea, nausea and vomiting, abdominal pain for 2–3 days, then fatigue and weakness	3	104	7	Recovery
24	None	None	Use of acetaminophen after onset of SAE-related symptoms (approximately 1 week before SAE diagnosis)	Nausea, abdominal pain, bloating for 17 months (waxing and waning), then fever, headache, myalgias, nausea for 4 days	2	499	438	Recovery
27	Hypothyroidism	None		Fatigue for 2 months, then icterus, dark urine for several days	1	146	107	Liver transplant
29	Eczema	Rare concurrent alcohol consumption		Fatigue, nausea for 2 weeks then icterus, dark urine and jaundice for several days	4	137	16	Death
35	HIV infection, chronic hepatitis C virus infection, eczema	HIV infection, chronic hepatitis C virus infection§	Concurrent administration of antiretroviral therapy, antibiotic therapy, and synthetic opioid medication	Pruritic rash and fever, fatigue, decreased appetite, nausea, vomiting, gradual darkening of urine for 1 week, then jaundice	3	87	7	Recovery
39	Morbid obesity, type 2 diabetes mellitus	Older age, ≤3 mos postpartum		Abdominal pain for 3 days, then nausea, diarrhea, dark urine, jaundice	4	121	2	Liver transplant, death
44	Depression, anxiety, obesity	Older age, possible concurrent daily alcohol use (reported after SAE diagnosis)	Concurrent use of selective serotonin reuptake inhibitor	Fatigue, nausea, vomiting, abdominal pain for 7 days, then jaundice for 2 days	3	97	9	Liver transplant
49	Hyperlipidemia, hypothyroidism, asthma	Older age	Concurrent use of lipid-lowering medication (statin)	Abdominal pain, fatigue for 7 days, then jaundice	3	91	9	Liver transplant
62	Type 2 diabetes mellitus	Older age	Concurrent use of sulfonylurea	Severe fatigue, left-sided flank pain for 2 weeks, then icterus, jaundice, dark urine for 5 days	1	56	20	Recovery

* Isonicotinylhydrazine.
† Predictors of INH-associated liver injury include preexisting liver disease, HIV infection, injection-drug use, concurrent alcohol consumption, pregnancy or the immediate postpartum period (≤3 months after delivery), older age, and concomitant administration of medications with hepatotoxic potential.
§ Aminotransferase values were within normal limits at initiation of INH.

For two patients, treatment was discontinued within 3 days of symptom onset (Table 2). Of the remaining eight patients, all discontinued INH at least 1 week after symptom onset. No patient discontinued INH until specifically instructed by a medical provider. All 10 patients underwent testing to exclude viral infections and other potential causes of liver injury. Liver biopsy or explanted liver histopathologic examination was performed for five patients; results from each revealed the presence of nonspecific changes consistent with drug-induced liver injury (*3*).

Seven of 10 patients had a putative predictor[§] for INH-associated liver injury (Table 3). Of the three patients without a putative risk factor, two had ingested acetaminophen-containing medications during INH therapy; however, the two had taken standard doses for less than 1 week.

[§] Predictors of INH-associated liver injury include preexisting liver disease, HIV infection, injection-drug use, concurrent alcohol consumption, pregnancy or the immediate postpartum period (≤3 months of delivery), concomitant administration of medications with hepatotoxic potential, and older age (*1*,*2*).

Reported by

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Editorial Note

Approximately 4% of the U.S. population has latent tuberculosis infection (LTBI) (*4*). Because LTBI can progress to active disease, CDC recommends testing and treatment of LTBI for persons in certain groups (*1*). The findings in this report underscore the importance of following ATS/CDC recommendations (Box) regarding selection of candidates for LTBI treatment and for following recommendations for sustained clinical monitoring throughout LTBI treatment to detect rare, but severe, adverse events among patients of any age.

The finding that seven of 10 SAEs were diagnosed by medical providers other than the ones that prescribed INH indicates the importance of provider-to-provider and provider-to-patient communication for the safe administration of INH therapy. In this series, a diagnostic delay occurred for at least one patient who sought care from a provider other than the INH prescriber. Also, eight patients continued taking the medication while developing symptoms, a practice that has been noted in other published reports (*5*). Medical providers should emphasize to patients that INH treatment should be stopped immediately upon the earliest onset of symptoms (e.g., excess fatigue, nausea, vomiting, abdominal pain, or jaundice), even before a clinical evaluation has been conducted, and that initial symptoms can be subtle and might not include jaundice.

Two of the 17 patients in this series were children. Although the condition is thought to be rarer in children than in adults, INH-associated liver injury has been reported previously in children (*6*), and both clinicians and patients should be aware that SAEs can occur among patients of all ages. Nine of the 17 SAEs occurred beyond the third month of therapy, indicating that INH-associated liver injury is possible anytime during the treatment course. This finding was in contrast to an earlier study that found 10 of 11 episodes of INH-induced hepatotoxicity occurred during the first 3 months of therapy (*7*).

BOX. American Thoracic Society/CDC recommendations for targeted testing and isoniazid treatment for latent tuberculosis infection (LTBI) and monitoring during treatment

- Existing recommendations emphasize the careful selection of candidates for LTBI testing and treatment based on risk for infection. Persons who are not at risk for TB infection should not undergo testing for LTBI.
- Monthly clinical monitoring, including a brief physical examination, for the signs and symptoms of LTBI treatment–associated adverse events is recommended for all patients.
- Patients who have human immunodeficiency virus (HIV) infection, patients who have chronic liver disease, pregnant women, women in the immediate postpartum period (≤3 months after delivery), and patients who use alcohol regularly should be considered for baseline laboratory hepatic testing.
- Although baseline laboratory testing is not routinely indicated in older persons, it may be considered on an individual basis, especially for patients who are taking medications for chronic medical conditions.
- Routine laboratory testing is indicated for patients whose baseline testing is abnormal and other persons at risk for hepatic disease.
- An evaluation including laboratory testing should be obtained upon the first sign or symptom of a possible adverse event. Providers should educate patients to discontinue treatment immediately, even before an evaluation is conducted.
- In the absence of symptoms, isoniazid should be discontinued if aminotransferase values are five times the upper limit of normal.
- In the presence of symptoms, isoniazid should be discontinued if aminotransferase values are three times the upper limit of normal.

SOURCES: CDC. Targeted tuberculin skin testing and treatment of latent tuberculosis infection. MMWR 2000;49(No. RR-6).

American Thoracic Society. An official ATS statement: hepatotoxicity of antituberculosis therapy. Am J Respir Crit Care Med 2006;174:935–52.

What is already known on this topic?

Since the 1960s, 6 to 9 months of isoniazid (INH) has been the mainstay of treatment for latent tuberculosis infection (LTBI), but its application has been limited by concerns about the toxicity of isoniazid and the long duration of treatment.

What is added by this report?

During 2004–2008, a total of 17 serious liver injuries were reported in patients receiving INH therapy; five patients underwent liver transplantation, and five died, including one liver transplant recipient.

What are the public health implications for public health practice?

Patients receiving INH therapy for LTBI should be told categorically by medical providers to stop taking their medication immediately if they have symptoms such as nausea, vomiting, abdominal discomfort, or unexplained fatigue and to contact their providers for further evaluation.

In this case series, all patients were monitored according to current guidelines (i.e., monthly clinical evaluation, including symptom screening and physical examination) (*1*,*2*), and two patients were selected for additional laboratory monitoring. However, despite adherence to current guidelines for monitoring, liver injury occurred, and SAE diagnosis was prompted by symptoms, not laboratory values. Additionally, three patients had no putative predictors of liver injury, indicating that careful monitoring is needed regardless of the patient's risk factor profile. Although all 10 patients in this series were symptomatic, INH-associated liver injury can occur even in the absence of symptoms.

INH-associated liver injury is an idiosyncratic reaction, independent of dosing, and is a diagnosis of exclusion (*2*). Historically the incidence has been estimated at 1 per 1,000 patients who begin treatment (*1*,*2*), but the lack of specific diagnostic criteria and heterogeneous definitions complicate comparisons across studies. The SAE surveillance system is the only national system that collects relevant public health data regarding the appropriateness of testing and treatment for LTBI and monitoring during treatment. However, as with all surveillance systems, underreporting is common in the SAE surveillance system, and LTBI is not reportable in most jurisdictions. In addition, calculation of INH-associated SAE rates is made difficult by the absence of reliable denominators for the number of persons initiating INH treatment, which has been estimated at 291,000 to 433,000 per year (*8*). Because the demographic characteristics of the patients who begin LTBI treatment with INH remain unknown, the risk factors for INH-associated liver injury cannot be determined conclusively.

LTBI treatment remains a key component of the TB elimination strategy in the United States. One study estimated that LTBI treatment prevented 4,000–11,000 TB cases in 2002 in the United States, substantially reducing the burden of TB (*8*). In the United States, 9 months of INH therapy is the standard LTBI treatment regimen. Efficacy and safety have not been established for other treatment regimens, such as 4 or 6 months of rifampin (*9*), 3 months of INH and rifampin (the preferred regimen in the United Kingdom [*10*]), or 3 months of once-weekly INH and rifapentine, a regimen currently under investigation (CDC, unpublished data, 2010).

Until an equally effective, better-tolerated regimen is developed, 9 months of INH therapy remains the mainstay of LTBI treatment. CDC encourages optimal use of INH by targeting LTBI testing to those patients most likely to benefit from treatment of LTBI (*1*). No more than a 1-month supply of INH at a time should be prescribed, and treatment should be combined with careful clinical monitoring (*1*,*2*). Alcohol consumption, underlying liver disease, and the concurrent use of medications that are metabolized in the liver can increase the occurrence or severity of liver injuries among INH recipients.

Local providers should report possible INH-associated SAEs to their respective health departments and to the Food and Drug Administration's MedWatch (https://www.accessdata.fda.gov/scripts/medwatch). State health departments should report these events to CDC's Division of Tuberculosis Elimination (e-mail: LTBIdrugevents@cdc.gov).

References

1. CDC. Targeted tuberculin skin testing and treatment of latent tuberculosis infection. MMWR 2000;49(No. RR-06).
2. American Thoracic Society. An official ATS statement: hepatotoxicity of antituberculosis therapy. Am J Respir Crit Care Med 2006;174:935–52.
3. Czaja AJ, Carpenter HA. Optimizing diagnosis from the medical liver biopsy. Clin Gastroenterol Hepatol 2007;5:898–907.
4. Bennett DE, Courval JM, Onorato I, et al. Prevalence of tuberculosis infection in the United States population: the national health and nutrition examination survey, 1999–2000. Am J Respir Crit Care 2008;177:348–55.

5. CDC. Severe isoniazid-associated hepatitis—New York, 1991–1993. MMWR 1993;42:545–7.
6. Pediatrics Tuberculosis Collaborative Group. Targeted tuberculin skin testing and treatment of latent tuberculosis infection in children and adolescents. Pediatrics 2004;114: 1175–201.
7. Nolan CM, Goldberg SV, Buskin SE. Hepatotoxicity associated with isoniazid preventive therapy: a 7-year survey from a public health tuberculosis clinic. JAMA 1999;281:1014–8.
8. Sterling TR, Bethel J, Goldberg S, et al. The scope and impact of treatment of latent tuberculosis infection in the United States. Am J Respir Crit Care Med 2006;173:927–31.
9. Menzies D, Long R, Trajman A, et al. Adverse events with 4 months of rifampin therapy or 9 months of isoniazid therapy for latent tuberculosis infection: a randomized trial. Ann Intern Med 2008;149:689–97.
10. Joint Tuberculosis Committee of the British Thoracic Society. Control and prevention of tuberculosis in the United Kingdom: code of practice 2000. Thorax 2000;55:887–901.

Respiratory Syncytial Virus Activity — United States, July 2008–December 2009

Respiratory syncytial virus (RSV) is the most common cause of bronchiolitis and pneumonia in children aged <1 year worldwide. Each year in the United States, an estimated 75,000–125,000 infants are hospitalized with RSV (*1*). Among adults aged >65 years, an estimated 177,000 hospitalizations and 14,000 deaths a year have been attributed to RSV infections (*2*). In temperate climates, the RSV season generally begins during the fall and continues through the winter and spring, but the exact timing of RSV circulation varies by location and year (*3*). In the United States, data from the National Respiratory and Enteric Virus Surveillance System (NREVSS) are used to monitor the seasonal occurrence of RSV. During the 2008–09 season, onset occurred from mid-October to late December in the 10 U.S. Department of Health and Human Services (HHS) regions,* excluding Florida, which had onset in mid-July. Season offset in all regions occurred from mid-February to mid-April. Florida is reported separately because it has an earlier season onset and longer duration than the rest of the country (*4*). During the current 2009–10 season, onset occurred in all 10 HHS regions by February 20, 2010. These patterns are similar to previous years and confirm differences in RSV seasonal characteristics across regions. Knowledge of RSV seasonality can be used by clinicians and public health officials to determine when to consider RSV as a cause of acute respiratory illnesses and when to provide RSV immunoprophylaxis to children at high risk for serious disease (*5*).

NREVSS is a voluntary, laboratory-based system that tracks temporal and geographic trends in the circulation of RSV and other viral pathogens. Laboratories report the number of RSV tests and the proportion that are positive, by collection date. For this analysis, the onset of the RSV national and regional season onset is the first of 2 consecutive weeks during which the mean percentage of specimens testing positive for RSV antigen is ≥10%. RSV season offset is defined as the last of 2 consecutive weeks during which the mean percentage of positive specimens is ≥10%. Season duration is the number of weeks between season onset and offset. For consistency, only antigen detection tests, which were used by 97% of participating laboratories during 2008-2009, were included in the analysis. Additionally, only data from laboratories that reported ≥30 weeks and averaged ≥10 specimens tested per week using antigen detection methods were included in the analysis for the 2008–09 season. For the initial phase of the 2009–10 reporting season, data from laboratories that reported ≥1 week and averaged ≥1 antigen detection test per week were included in the analysis. Persons might be tested, and therefore represented in the data, more than once.

During July 2008–June 2009 (weeks ending July 5, 2008–June 27, 2009), 238 (33%) of 718 reporting laboratories from 45 states met inclusion criteria. These laboratories reported a total of 404,798 tests, of which 60,793 (15%) were positive.† The national 2008–09 RSV season onset occurred the week ending November 1, 2008, and continued for 20 weeks until the season offset, the week ending March 21, 2009 (Table). When data from Florida were excluded (onset date in July), the national RSV season onset began 2 weeks later (week ending November 15, 2008); the season offset was not affected.

The 2008–09 season onset for all 10 HHS regions, excluding Florida, ranged from mid-October (week ending October 11, 2008) to late-December (week ending December 27, 2008) (Table and Figure). The season onset for Florida was the week ending July 12, 2008 and continued until the week ending February 7, 2009 (Figure). The 2008–09 season offset for all 10 HHS regions and Florida ranged from early February (week ending February 7, 2008) to mid-April (week ending April 11, 2009) (Table and Figure). Excluding Florida, the median season duration among the 10 HHS regions was 16 weeks (range: 14–23 weeks) (Table). The region with the shortest season was Region 3 (Philadelphia region) (14 weeks), and the longest season was in Region 4 (Atlanta region) (23

* The 10 HHS regions (listed by region number and headquarters city) are Region 1 (Boston), Region 2 (New York), Region 3 (Philadelphia), Region 4 (Atlanta), Region 5 (Chicago), Region 6 (Dallas), Region 7 (Kansas City), Region 8 (Denver), Region 9 (San Francisco), and Region 10 (Seattle).

† Surveillance Data, Inc. (SDI), a private company that conducts RSV surveillance with support from MedImmune, Inc. (Gaithersburg, Maryland), contributes laboratory data to NREVSS.

TABLE. Summary of 2008–09 respiratory syncytial virus season and 2009–10 season onset, by U.S. Department of Health and Human Services (HHS) region* and Florida — National Respiratory and Enteric Virus Surveillance System, July 5, 2008–February 20, 2010

		2008–09 season				2009–10 season	
HHS Region or state/area	States†	No. of laboratories reporting	Onset week ending	Offset week ending	Season duration (wks)	No. of laboratories reporting	Onset week ending
National	All contributing states and DC	238	11/1	3/21	20	634	11/14
Florida	FL	20	7/12	2/7	30	35	7/18
Region 4 (Atlanta)§	AL, GA, KY, MS, NC, SC, TN	28	10/11	3/21	23	85	10/24
Region 6 (Dallas)	AR, LA, NM, OK, TX	29	10/25	2/14	16	78	11/14
Region 2 (New York)	NJ, NY	23	11/15	2/28	15	62	11/7
Region 3 (Philadelphia)	DE, DC, MD, PA, VA, WV	28	11/22	2/28	14	70	11/21
Region 10 (Seattle)	AK, ID, OR, WA	12	11/22	4/4	19	32	12/26
Region 1 (Boston)	CT, ME, MA, NH, RI, VT	8	11/29	3/21	16	31	12/5
Region 9 (San Francisco)	AZ, CA, HI, NV	31	11/29	3/14	15	71	12/26
Region 7 (Kansas City)	IA, KS, MO, NE	15	11/29	3/21	16	33	12/26
Region 5 (Chicago)	IL, IN, MI, MN, OH, WI	34	11/29	4/4	18	109	12/5
Region 8 (Denver)	CO, MT, ND, SD, UT, WY	10	12/27	4/11	15	25	12/19

* Listed by region number and headquarters city. Region 1 (Boston): Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, and Vermont. Region 2 (New York): New Jersey and New York. Region 3 (Philadelphia): Delaware, District of Columbia, Maryland, Pennsylvania, Virginia, and West Virginia. Region 4 (Atlanta): Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, and Tennessee. Region 5 (Chicago): Illinois, Indiana, Michigan, Minnesota, Ohio, and Wisconsin. Region 6 (Dallas): Arkansas, Louisiana, New Mexico, Oklahoma, and Texas. Region 7 (Kansas City): Iowa, Kansas, Missouri, and Nebraska. Region 8 (Denver): Colorado, Montana, North Dakota, South Dakota, Utah, and Wyoming. Region 9 (San Francisco): Arizona, California, Hawaii, and Nevada. Region 10 (Seattle): Alaska, Idaho, Oregon, and Washington. Maine, New Hampshire, District of Columbia, New Mexico, Nebraska, Montana, and Idaho did not have any participating laboratories in the 2008–09 season analysis.

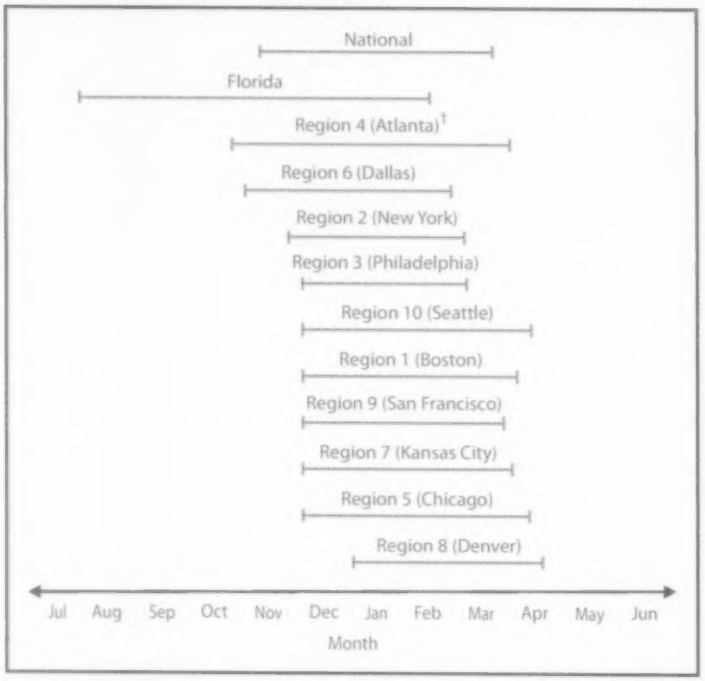
† Excludes data from Florida.

weeks). Preliminary data for the current 2009–10 RSV season (week ending July 28, 2009–February 20, 2010) were reported by 634 laboratories from all 50 states and the District of Columbia. A total of 316,453 RSV antigen detection tests were performed, and 50,070, (16%) positive results were reported to NREVSS. The season onset had occurred in all 10 HHS regions by February 20, 2010. Nationally, the 2009–10 RSV season onset occurred during the week ending November 14, 2009; however, when data from Florida were excluded, the national season onset occurred 1 week later (week ending November 21, 2009) (Table). Weekly updates showing RSV national, regional, and state trends are available from the NREVSS website at http://www.cdc.gov/surveillance/nrevss. Additional information about Florida RSV trends is available from the Florida Department of Health website at http://www.doh.state.fl.us/disease_ctrl/epi/rsv/rsv.htm.

Reported by

National Respiratory and Enteric Virus Surveillance System laboratories. GR Villarruel, MPH, GE Langley, MD, GR Abedi, LJ Anderson, MD, Div of Viral Diseases, National Center for Immunization and Respiratory Diseases, CDC.

FIGURE. Duration of respiratory syncytial virus season, by U.S. Department of Health and Human Services region* and Florida — National Respiratory and Enteric Virus Surveillance System, July 2008–June 2009



* Listed by region number and headquarters city. Region 1 (Boston): Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, and Vermont. Region 2 (New York): New Jersey and New York. Region 3 (Philadelphia): Delaware, District of Columbia, Maryland, Pennsylvania, Virginia, and West Virginia. Region 4 (Atlanta): Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, and Tennessee. Region 5 (Chicago): Illinois, Indiana, Michigan, Minnesota, Ohio, and Wisconsin. Region 6 (Dallas): Arkansas, Louisiana, New Mexico, Oklahoma, and Texas. Region 7 (Kansas City): Iowa, Kansas, Missouri, and Nebraska. Region 8 (Denver): Colorado, Montana, North Dakota, South Dakota, Utah, and Wyoming. Region 9 (San Francisco): Arizona, California, Hawaii, and Nevada. Region 10 (Seattle): Alaska, Idaho, Oregon, and Washington. Maine, New Hampshire, District of Columbia, New Mexico, Nebraska, Montana, and Idaho did not have any participating laboratories in the 2008–09 season analysis.

† Excludes data from Florida.

Editorial Note

During the July 2008–June 2009 surveillance period, the national and regional RSV seasonal trends in onset, offset, and duration were similar to those reported for previous years, although the season started 1–3 weeks later during 2008–09 compared with 2007–08 in 10 HHS regions (*4*). The season onset was earlier and the duration was longer in Florida compared with other regions, which is consistent with a previous report (*4*). CDC alerts practitioners and public health officials about the timing of the season by posting timely data on the NREVSS website.

What is already known of this topic?

The respiratory syncytial virus (RSV) season generally begins during the fall and continues through the winter and spring months, but the exact timing of RSV circulation can vary by location and year.

What is added by this report?

This report describes the timing of the two most recent RSV seasons: for 2008–09, the season onset for the 10 U.S. Health and Human Services (HHS) regions, excluding Florida, occurred from mid-October to late December and in mid-July in Florida, and offset occurred from mid-February to mid-April; in the current 2009–10 season, onset occurred in all 10 HHS regions by February 20, 2010.

What are the implications for public health practice?

The timing of RSV season was similar to previous reports and again demonstrated the variation in onset, offset, and duration by HHS regions and Florida; knowledge of RSV seasonality can be used by clinicians and public health officials to determine when to consider RSV as a cause of acute respiratory illnesses and when to provide RSV immunoprophylaxis to children at high risk for serious disease.

Reasons for regional and state differences in seasonality patterns might include variations in weather conditions that affect the transmissibility or viability of the virus (*6*). Social and demographic factors, such as household crowding and population density, also might contribute to differences in the timing and duration of RSV seasons (*7*).

Symptoms of RSV can be similar to those of other common respiratory pathogens, such as seasonal and pandemic H1N1 influenza. Knowing the timing of the RSV season can help determine when to consider it in the diagnosis of patients with respiratory illnesses. Determining the etiology of these illnesses has implications for treatment and control efforts.

Knowledge about the onset of RSV season can help determine when to initiate prevention strategies. RSV is transmitted person-to-person via direct or close contact with contaminated secretions, including respiratory droplets or fomites. In the community, attention to hand hygiene and limiting exposure of high-risk groups to settings where transmission is common, such as day-care settings, is recommended (*5*). Transmission of RSV in health-care settings can cause considerable morbidity in young children and older adults already at high risk for RSV (*8*). Infection control practices, including standard precautions,

contact precautions, and cohorting of infected persons, are recommended (*5*).

Additionally, the data have been used to help determine when to administer prophylaxis with the monoclonal anti-RSV antibody, palivizumab (*9*). Palivizumab, which has been shown to reduce RSV hospitalizations in select infants and children with congenital heart disease, chronic lung disease, and compromised immune systems, or those born prematurely, is given as monthly intramuscular injections during the RSV season (*9*). The most recent policy statement from the American Academy of Pediatrics should be consulted for specific recommendations, including which specific infants and children are recommended for prophylaxis and the duration of prophylaxis (*9*).

The findings in this report are subject to at least two limitations. First, NREVSS relies on voluntary reporting, and the findings might not represent actual circulation of the virus at the national, regional, or state level. However, analyses have shown a correlation between NREVSS findings and RSV hospitalizations in children (*10*). Second, the definitions of onset and offset might not capture periods of low RSV activity. Despite these limitations, the data in this report provide epidemiologic information to guide diagnostic testing and help determine the timing of prevention programs.

References

1. Shay DK, Holman RC, Newman RD, Liu LL, Stout JW, Anderson LJ. Bronchiolitis-associated hospitalizations among U.S. children, 1980–1996. JAMA 1999;282:1440–6.
2. Falsey AR, Hennessey PA, Formica MA, Cox C, Walsh EE. Respiratory syncytial virus infection in elderly and high-risk adults. N Engl J Med 2005;352:1749–59.
3. Mullins JA, LaMonte AC, Bresee JS, Anderson LJ. Substantial variability in community RSV season timing. Pediatr Infect Dis J 2003;22:857–62.
4. CDC. Respiratory syncytial virus activity—United States, July 2008–December 2008. MMWR 2008;57:1355–8.
5. American Academy of Pediatrics. Respiratory syncytial virus. In: Pickering LK, Baker CJ, Kimberlin DW, Long SS, eds. Red book: 2009 Report of the Committee on Infectious Diseases. 28th ed. Elk Grove Village, IL: American Academy of Pediatrics; 2009:560–9.
6. Welliver RC Sr. Temperature, humidity, and ultraviolet B radiation predict community respiratory syncytial virus activity. Pediatr Infect Dis J 2007;26:S29–35.
7. Zachariah P, Shah S, Gao D, Simoes EA. Predictors of the duration of the respiratory syncytial virus season. Pediatr Infect Dis J 2009;28:772–6.
8. Hall CB. Nosocomial respiratory syncytial virus infections: the "Cold War" has not ended. Clin Infect Dis 2000;31:590–6.
9. American Academy of Pediatrics Committee on Infectious Diseases. Modified recommendations for use of palivizumab for prevention of respiratory syncytial virus infections. Pediatrics. 2009;124:1694 –701.
10. Light M, Bauman J, Mavunda K, Malinoski F, Eggleston M. Correlation between respiratory syncytial virus (RSV) test data and hospitalization of children for RSV lower respiratory tract illness in Florida. Pediatr Infect Dis J 2008;27:512–8.

Announcements

Ground Water Awareness Week — March 7–13, 2010

National Ground Water Awareness Week, sponsored annually by the National Ground Water Association (NGWA), is March 7–13, 2010. The majority of public water systems in the United States use groundwater as their primary source to provide drinking water to an estimated 90 million persons (*1*). An additional 15 million U.S. homes use private wells, which also rely on groundwater (*2*).

Owners of private wells are responsible for ensuring that their well water is safe from harmful groundwater contaminants. These contaminants can occur naturally, but are usually the result of local land use practices (e.g., fertilizer and pesticide use), manufacturing processes, and leakage from nearby septic systems. The presence of contaminants in drinking water can lead to illness, disease, and other health problems (*3*).

NGWA uses this week to stress the importance of yearly water testing and well maintenance (*4*). Private well owners can take simple steps to reduce well water contamination risks. These precautions include ensuring that the well is located away from potential contamination sources (e.g., septic and waste-water systems, animal enclosures, and chemical storage areas) and conducting an annual maintenance check of the well (*5,6*).

Additional information about Ground Water Awareness Week, well maintenance, water testing, and well water treatment is available from CDC at http://www.cdc.gov/healthywater/drinking/private/wells/index.html, from the Environmental Protection Agency at http://www.epa.gov/safewater/privatewells/whatyoucando.html, and from NGWA at http://www.wellowner.org.

References

1. Environmental Protection Agency. Factoids: drinking water and ground water statistics for 2009. Washington, DC: Environmental Protection Agency; 2010. Available at http://www.epa.gov/safewater/databases/pdfs/data_factoids_2009.pdf. Accessed February 24, 2010.
2. Census Bureau. Current housing reports, series H150/07, American housing survey for the United States: 2007. Washington, DC: Government Printing Office; 2008. Available at http://www.census.gov/prod/2008pubs/h150-07.pdf. Accessed February 24, 2010.
3. Environmental Protection Agency. Drinking water contaminants. Washington, DC: Environmental Protection Agency; 2010. Available at http://www.epa.gov/safewater/contaminants/index.html. Accessed February 24, 2010.
4. National Ground Water Association. National Ground Water Awareness Week: March 7–13, 2010. Westerville, OH: National Ground Water Association. Available at http://www.ngwa.org/public/awarenessweek/index.aspx. Accessed February 23, 2010.
5. Environmental Protection Agency. Private drinking water wells: basic information. Washington, DC: Environmental Protection Agency; 2010. Available at http://www.epa.gov/safewater/privatewells/basicinformation.html. Accessed February 24, 2010.
6. National Ground Water Association. Well maintenance: homeowner's checklist. Westerville, OH: National Ground Water Association; 2009. Available at http://www.wellowner.org. Accessed February 23, 2010.

New WISQARS Fatal Injury Mapping Module

CDC's Web-based Injury Statistics Query and Reporting System (WISQARS) is a leading source of injury statistics in the United States. WISQARS provides data on injury deaths, violent deaths, and nonfatal injuries, and now a new WISQARS fatal injury mapping module allows users to produce customized, color-coded maps of injury death rates, by intent (e.g., unintentional, homicide, or suicide) and mechanism of injury (e.g., motor vehicle-traffic, fall, fire/burn, poisoning, or cut/pierce).

These maps show the distribution of injury death rates nationally, regionally, and for individual states and counties. In addition, annualized estimates of total lifetime medical and work loss costs resulting from injury-related deaths are provided for counties within individual states. The new module can help public health professionals compare injury rates across geographic areas and monitor fatal injuries and their associated burden in the United States. The new fatal injury mapping module is available at http://www.cdc.gov/injury/wisqars.

World Kidney Day — March 11

March 11 is World Kidney Day, an event intended to raise awareness of the importance of prevention and early detection of kidney disease. In the United States, kidney disease is the ninth leading cause of death (*1*). In 2000, 26 million U.S. adults had chronic kidney disease (CKD), and most of them were unaware of their condition (*2,3*). CDC's CKD Initiative (http://www.cdc.gov/diabetes/projects/kidney.htm), which includes surveillance, screening, and cost studies, provides public health strategies for promoting kidney health.

This year, World Kidney Day focuses on diabetes, the leading cause of CKD (*4*). Among persons with diabetes, interventions to control blood sugar and blood pressure reduce the risk for developing kidney disease or slow its progression (*4*). Information regarding kidney disease prevention and control and World Kidney Day activities is available at http://www.nkdep.nih.gov and http://www.worldkidneyday.org.

References

1. Heron MP, Hoyert DL, Murphy SL, et al. Deaths: final data for 2006. Natl Vital Stat Rep 2009;57(14).
2. Coresh J, Selvin E, Stevens LA, et al. Prevalence of chronic kidney disease in the United States. JAMA 2007;298:2038–47.
3. Plantinga LC, Boulware LE, Coresh J, et al. Patient awareness of chronic kidney disease: trends and predictors. Arch Intern Med 2008;168:2268–75.
4. American Diabetes Association. Nephropathy screening and treatment. Diabetes Care 2010;33(Suppl 1):S34–6.

Brain Injury Awareness Month — March 2010

This year, in recognition of Brain Injury Awareness Month, CDC encourages school professionals, coaches, parents, and athletes to learn the risks for concussions in youth sports. A concussion is a type of traumatic brain injury caused by a bump, blow, or jolt to the head.

An estimated 135,000 sports and recreation-related traumatic brain injuries, including concussions, are treated in U.S. emergency departments each year (*1*). Most persons with a concussion recover fully. However, returning to sports and other regular activities too quickly can prolong recovery time, sometimes for months. A repeat concussion that occurs before the brain recovers from the first can be very dangerous and might slow recovery or increase the chances for long-term problems.

To date, CDC has disseminated approximately 1.3 million educational pieces on concussion in sports for health-care professionals, coaches, parents, and athletes (*2*). CDC's next steps include an online training course for coaches on concussion prevention, recognition, and response. CDC also will be launching a national initiative that consists of educational materials for school professionals who work with students aged 5–18 years (or in grades K-12). The new initiative, Heads Up to Schools: Know Your Concussion ABCs, will focus on the prevention, recognition, and response to concussion in schools. Additional information about concussions in sports is available at http://www.cdc.gov/concussion.

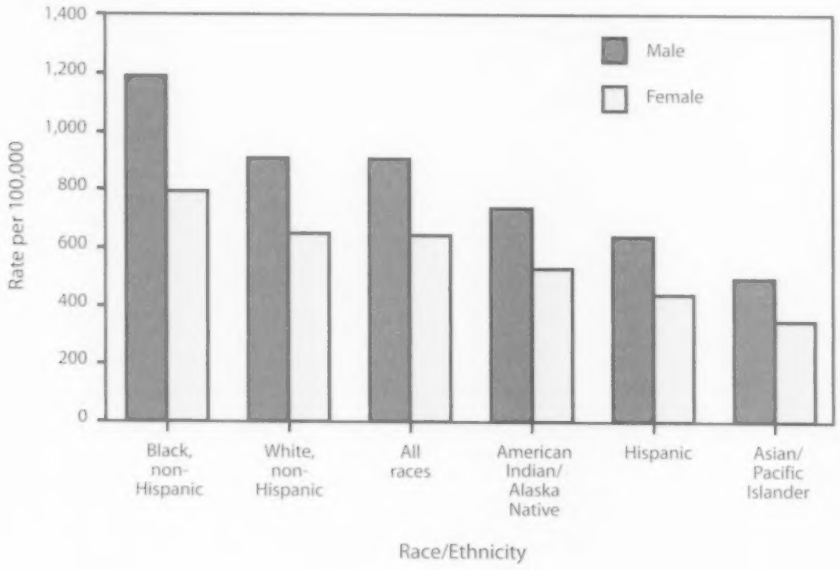
References

1. CDC. Sports-related recurrent brain injuries—United States. MMWR 1997;46:224–7.
2. Sarmiento K. Evaluation of the Centers for Disease Control and Prevention's concussion initiative for high school coaches: "Heads up: Concussion in High School Sports." J Sch Health 2010;80:112–8.

QuickStats

FROM THE NATIONAL CENTER FOR HEALTH STATISTICS

Age-Adjusted Death Rates* by Sex, Race, and Hispanic Ethnicity — United States, 2007†



*Per 100,000 population. Race and Hispanic ethnicity are reported separately on death certificates. Persons of Hispanic ethnicity might be of any race. Rates for American Indian/Alaska Native and Asian/Pacific Islander populations are underestimates because of inconsistencies between reporting race on death certificates and on censuses and surveys.

†Data for 2007 are preliminary.

In 2007, the mortality rate was lowest for the Asian/Pacific Islander female population and highest for the non-Hispanic black male population. For each racial/ethnic group, the death rate was substantially lower for females compared with males.

SOURCE: Xu J, Kochanek KD, Tejada-Vera B. Deaths: preliminary data for 2007. Natl Vital Stat Rep 2009;58(1). Hyattsville, MD: US Department of Health and Human Services, CDC; 2009. Available at http://www.cdc.gov/nchs/data/nvsr/nvsr58/nvsr58_01.pdf.

Notifiable Diseases and Mortality Tables

TABLE I. Provisional cases of infrequently reported notifiable diseases (<1,000 cases reported during the preceding year) — United States, week ending February 27, 2010 (8th week)*

Disease	Current week	Cum 2010	5-year weekly average†	Total cases reported for previous years 2009	2008	2007	2006	2005	States reporting cases during current week (No.)
Anthrax	—	—	0	1	—	1	1	—	
Botulism, total	—	7	2	98	145	144	165	135	
foodborne	—	—	0	11	17	32	20	19	
infant	—	6	2	64	109	85	97	85	
other (wound and unspecified)	—	1	1	23	19	27	48	31	
Brucellosis	—	6	2	111	80	131	121	120	
Chancroid	—	12	1	46	25	23	33	17	
Cholera	—	—	—	8	5	7	9	8	
Cyclosporiasis§	—	7	1	128	139	93	137	543	
Diphtheria	—	—	—	—	—	—	—	—	
Domestic arboviral diseases§,¶:									
California serogroup virus disease	—	—	0	54	62	55	67	80	
Eastern equine encephalitis virus disease	—	—	—	4	4	4	8	21	
Powassan virus disease	—	—	—	4	2	7	1	1	
St. Louis encephalitis virus disease	—	—	0	11	13	9	10	13	
Western equine encephalitis virus disease	—	—	—	—	—	—	—	—	
Haemophilus influenzae,** invasive disease (age <5 yrs):									
serotype b	1	2	0	27	30	22	29	9	TX (1)
nonserotype b	2	19	5	215	244	199	175	135	FL (1), OK (1)
unknown serotype	4	43	4	231	163	180	179	217	NY (2), AR (1), OK (1)
Hansen disease§	—	6	2	73	80	101	66	87	
Hantavirus pulmonary syndrome§	—	1	0	13	18	32	40	26	
Hemolytic uremic syndrome, postdiarrheal§	2	13	2	230	330	292	288	221	MD (1), CA (1)
HIV infection, pediatric (age <13 yrs)††	—	—	2	—	—	—	—	380	
Influenza-associated pediatric mortality§,§§	1	39	4	360	90	77	43	45	FL (1)
Listeriosis	6	61	9	784	759	808	884	896	NY (1), WA (1), CA (4)
Measles¶¶	—	2	1	65	140	43	55	66	
Meningococcal disease, invasive***:									
A, C, Y, and W-135	1	25	10	282	330	325	318	297	TN (1)
serogroup B	3	16	5	148	188	167	193	156	MD (1), VA (1), FL (1)
other serogroup	—	1	1	23	38	35	32	27	
unknown serogroup	5	60	16	477	616	550	651	765	OH (1), MO (1), FL (1), CA (2)
Mumps	43	400	17	1,443	454	800	6,584	314	NY (39), PA (1), OH (1), MO (1), CA (1)
Novel influenza A virus infections†††	—	—	0	43,771	2	4	NN	NN	
Plague	—	—	0	8	3	7	17	8	
Poliomyelitis, paralytic	—	—	—	—	—	—	—	1	
Polio virus infection, nonparalytic§	—	—	—	—	—	—	NN	NN	
Psittacosis§	—	1	0	9	8	12	21	16	
Q fever, total§,§§§	2	7	2	101	120	171	169	136	
acute	1	5	1	84	106	—	—	—	MI (1)
chronic	1	2	0	17	14	—	—	—	WA (1)
Rabies, human	—	—	—	4	2	1	3	2	
Rubella¶¶¶	—	1	0	3	16	12	11	11	
Rubella, congenital syndrome	—	—	0	1	—	—	1	1	
SARS-CoV§,****	—	—	—	—	—	—	—	—	
Smallpox§	—	—	—	—	—	—	—	—	
Streptococcal toxic-shock syndrome§	2	13	4	135	157	132	125	129	OH (1), KY (1)
Syphilis, congenital (age <1 yr)	—	11	6	306	431	430	349	329	
Tetanus	—	—	0	16	19	28	41	27	
Toxic-shock syndrome (staphylococcal)§	—	11	2	74	71	92	101	90	
Trichinellosis	—	—	0	11	39	5	15	16	
Tularemia	—	1	0	88	123	137	95	154	
Typhoid fever	3	48	6	343	449	434	353	324	ME (1), WA (2)
Vancomycin-intermediate *Staphylococcus aureus*§	1	5	1	71	63	37	6	2	MO (1)
Vancomycin-resistant *Staphylococcus aureus*§	—	—	—	—	—	2	1	3	
Vibriosis (noncholera *Vibrio* species infections)§	1	16	2	676	588	549	NN	NN	FL (1)
Viral Hemorrhagic Fever††††	—	—	—	NN	NN	NN	NN	NN	
Yellow fever	—	—	—	—	—	—	—	—	

See Table I footnotes on next page.

TABLE I. (*Continued*) Provisional cases of infrequently reported notifiable diseases (<1,000 cases reported during the preceding year) — United States, week ending February 27, 2010 (8th week)*

—: No reported cases. N: Not reportable. NN: Not Nationally Notifiable Cum: Cumulative year-to-date counts.

* Incidence data for reporting years 2009 and 2010 are provisional, whereas data for 2005 through 2008 are finalized.

† Calculated by summing the incidence counts for the current week, the 2 weeks preceding the current week, and the 2 weeks following the current week, for a total of 5 preceding years. Additional information is available at http://www.cdc.gov/epo/dphsi/phs/files/5yearweeklyaverage.pdf.

§ Not reportable in all states. Data from states where the condition is not reportable are excluded from this table, except starting in 2007 for the domestic arboviral diseases and influenza-associated pediatric mortality, and in 2003 for SARS-CoV. Reporting exceptions are available at http://www.cdc.gov/epo/dphsi/phs/infdis.htm.

¶ Includes both neuroinvasive and nonneuroinvasive. Updated weekly from reports to the Division of Vector-Borne Infectious Diseases, National Center for Zoonotic, Vector-Borne, and Enteric Diseases (ArboNET Surveillance). Data for West Nile virus are available in Table II.

** Data for *H. influenzae* (all ages, all serotypes) are available in Table II.

†† Updated monthly from reports to the Division of HIV/AIDS Prevention, National Center for HIV/AIDS, Viral Hepatitis, STD, and TB Prevention. Implementation of HIV reporting influences the number of cases reported. Updates of pediatric HIV data have been temporarily suspended until upgrading of the national HIV/AIDS surveillance data management system is completed. Data for HIV/AIDS, when available, are displayed in Table IV, which appears quarterly.

§§ Updated weekly from reports to the Influenza Division, National Center for Immunization and Respiratory Diseases. Since April 26, 2009, a total of 278 influenza-associated pediatric deaths associated with 2009 influenza A (H1N1) virus infection have been reported. Since August 30, 2009, a total of 265 influenza-associated pediatric deaths occurring during the 2009–10 influenza season have been reported. A total of 133 influenza-associated pediatric deaths occurring during the 2008–09 influenza season have been reported.

¶¶ No measles cases were reported for the current week.

*** Data for meningococcal disease (all serogroups) are available in Table II.

††† CDC discontinued reporting of individual confirmed and probable cases of 2009 pandemic influenza A (H1N1) virus infections on July 24, 2009. CDC will report the total number of 2009 pandemic influenza A (H1N1) hospitalizations and deaths weekly on the CDC H1N1 influenza website (http://www.cdc.gov/h1n1flu). In addition, three cases of novel influenza A virus infections, unrelated to the 2009 pandemic influenza A (H1N1) virus, were reported to CDC during 2009.

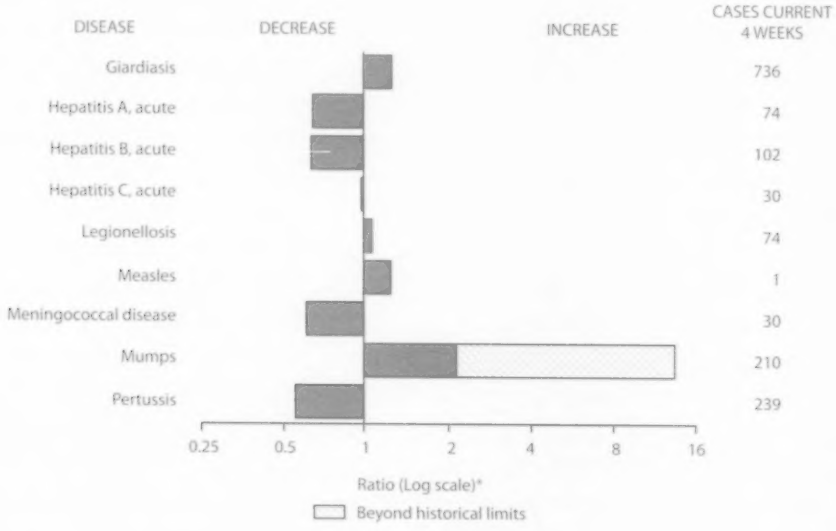
§§§ In 2009, Q fever acute and chronic reporting categories were recognized as a result of revisions to the Q fever case definition. Prior to that time, case counts were not differentiated with respect to acute and chronic Q fever cases.

¶¶¶ No rubella cases were reported for the current week.

**** Updated weekly from reports to the Division of Viral and Rickettsial Diseases, National Center for Zoonotic, Vector-Borne, and Enteric Diseases.

†††† There were no cases of Viral Hemorrhagic Fever during week one. See Table II for Dengue Hemorrhagic Fever.

FIGURE I. Selected notifiable disease reports, United States, comparison of provisional 4-week totals February 27, 2010, with historical data



* Ratio of current 4-week total to mean of 15 4-week totals (from previous, comparable, and subsequent 4-week periods for the past 5 years). The point where the hatched area begins is based on the mean and two standard deviations of these 4-week totals.

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TABLE II. Provisional cases of selected notifiable diseases, United States, weeks ending February 27, 2010, and February 28, 2009 (8th week)*

Reporting area	*Chlamydia trachomatis* infection					Cryptosporidiosis				
	Current week	Previous 52 weeks		Cum 2010	Cum 2009	Current week	Previous 52 weeks		Cum 2010	Cum 2009
		Med	Max				Med	Max		
United States	11,417	23,126	27,376	134,508	193,442	31	116	261	598	647
New England	573	765	1,194	4,864	6,189	—	6	24	35	70
Connecticut	150	222	531	859	1,612	—	0	11	11	38
Maine†	51	47	75	381	428	—	1	4	10	3
Massachusetts	343	377	767	2,923	3,164	—	2	15	—	18
New Hampshire	4	39	60	88	347	—	1	5	4	6
Rhode Island†	—	67	244	444	467	—	0	8	1	1
Vermont†	25	23	63	169	171	—	1	9	9	4
Mid. Atlantic	3,809	2,983	4,296	23,002	23,290	5	14	37	60	69
New Jersey	546	398	630	2,421	4,113	—	0	5	—	4
New York (Upstate)	568	609	2,145	4,125	3,827	1	3	16	11	22
New York City	2,289	1,178	1,953	10,245	8,672	—	1	5	4	14
Pennsylvania	406	816	1,008	6,211	6,678	4	9	19	45	29
E.N. Central	800	3,451	4,282	14,720	32,083	4	27	54	134	156
Illinois	—	1,015	1,219	137	9,884	—	2	8	10	16
Indiana	—	396	694	685	3,493	—	3	9	5	28
Michigan	504	874	1,332	7,923	7,606	1	6	11	42	33
Ohio	99	646	1,026	3,181	7,878	2	7	16	35	41
Wisconsin	197	387	480	2,794	3,222	1	9	24	42	38
W.N. Central	398	1,310	1,703	6,867	10,886	4	19	61	73	62
Iowa	16	170	252	566	1,547	2	3	14	17	11
Kansas	27	182	561	1,234	1,539	—	2	6	8	6
Minnesota	—	270	338	539	2,304	—	5	34	22	12
Missouri	355	507	638	3,823	3,973	1	3	12	11	16
Nebraska†	—	106	236	602	793	1	2	9	9	9
North Dakota	—	31	92	103	248	—	0	5	—	—
South Dakota	—	47	80	—	482	—	1	10	6	8
S. Atlantic	2,530	4,651	6,207	22,695	37,308	9	17	49	136	146
Delaware	117	85	180	625	770	—	0	2	1	—
District of Columbia	—	121	178	627	1,166	—	0	1	—	1
Florida	548	1,414	1,671	9,738	11,501	5	7	24	53	46
Georgia	—	678	1,134	44	5,975	4	5	31	69	63
Maryland†	457	445	1,028	2,367	3,016	—	1	5	3	5
North Carolina	—	653	1,265	—	6,622	—	0	8	—	20
South Carolina†	669	523	1,421	4,214	3,726	—	1	7	4	4
Virginia†	723	607	926	4,615	3,881	—	1	7	4	6
West Virginia	16	68	136	465	651	—	0	2	2	1
E.S. Central	1,057	1,724	2,232	10,611	14,159	1	4	10	25	19
Alabama†	34	459	629	2,266	3,842	—	1	5	4	6
Kentucky	418	206	642	1,682	1,946	—	1	4	8	3
Mississippi	—	430	840	2,304	3,642	—	0	3	4	4
Tennessee†	605	579	808	4,359	4,729	1	1	5	9	6
W.S. Central	548	3,050	5,787	23,329	25,491	1	8	37	20	33
Arkansas†	326	269	416	2,053	2,464	1	1	5	7	3
Louisiana	1	520	1,055	2,922	4,982	—	0	6	—	4
Oklahoma	221	200	2,714	2,877	1,119	—	2	9	4	5
Texas†	—	2,040	3,079	15,477	16,926	—	5	22	9	21
Mountain	311	1,372	2,096	7,971	11,503	2	10	26	55	37
Arizona	67	490	755	2,475	3,648	—	0	3	2	4
Colorado	—	322	689	2,105	2,624	1	2	10	16	7
Idaho†	36	62	184	318	565	1	2	7	14	3
Montana†	22	55	86	378	516	—	1	4	7	2
Nevada†	175	171	478	1,277	1,775	—	0	2	1	—
New Mexico†	—	175	257	664	1,030	—	2	8	8	16
Utah	—	112	142	484	1,045	—	0	4	5	1
Wyoming†	11	36	69	270	300	—	0	2	2	4
Pacific	1,391	3,475	4,808	20,449	32,533	5	13	25	60	55
Alaska	—	98	128	626	884	—	0	1	1	1
California	1,391	2,638	3,900	15,917	25,450	4	7	17	33	33
Hawaii	—	119	147	606	910	—	0	1	—	—
Oregon	—	217	468	1,367	1,530	1	3	10	17	19
Washington	—	392	525	1,933	3,759	—	1	12	9	2
American Samoa	—	0	0	—	—	N	0	0	N	N
C.N.M.I.	—	—	—	—	—	—	—	—	—	—
Guam	—	0	0	—	—	—	0	0	—	—
Puerto Rico	271	128	331	913	1,113	N	0	0	N	N
U.S. Virgin Islands	—	9	17	19	34	—	0	0	—	—

C.N.M.I.: Commonwealth of Northern Mariana Islands.
U: Unavailable. —: No reported cases. N: Not reportable. NN: Not Nationally Notifiable. Cum: Cumulative year-to-date counts. Med: Median. Max: Maximum.
* Incidence data for reporting years 2009 and 2010 are provisional. Data for HIV/AIDS, AIDS, and TB, when available, are displayed in Table IV, which appears quarterly.
† Contains data reported through the National Electronic Disease Surveillance System (NEDSS).

TABLE II. (*Continued*) Provisional cases of selected notifiable diseases, United States, weeks ending February 27, 2010, and February 28, 2009 (8th week)*

Reporting area	Dengue Virus Infection									
	Dengue Fever					Dengue Hemorrhagic Fever†				
	Current week	Previous 52 weeks		Cum 2010	Cum 2009	Current week	Previous 52 weeks		Cum 2010	Cum 2009
		Med	Max				Med	Max		
United States	—	0	2	5	NN	—	0	0	—	NN
New England	—	0	1	1	NN	—	0	0	—	NN
Connecticut	—	0	0	—	NN	—	0	0	—	NN
Maine§	—	0	1	1	NN	—	0	0	—	NN
Massachusetts	—	0	0	—	NN	—	0	0	—	NN
New Hampshire	—	0	0	—	NN	—	0	0	—	NN
Rhode Island§	—	0	0	—	NN	—	0	0	—	NN
Vermont§	—	0	0	—	NN	—	0	0	—	NN
Mid. Atlantic	—	0	1	1	NN	—	0	0	—	NN
New Jersey	—	0	0	—	NN	—	0	0	—	NN
New York (Upstate)	—	0	0	—	NN	—	0	0	—	NN
New York City	—	0	0	—	NN	—	0	0	—	NN
Pennsylvania	—	0	1	1	NN	—	0	0	—	NN
E.N. Central	—	0	1	1	NN	—	0	0	—	NN
Illinois	—	0	0	—	NN	—	0	0	—	NN
Indiana	—	0	0	—	NN	—	0	0	—	NN
Michigan	—	0	0	—	NN	—	0	0	—	NN
Ohio	—	0	1	1	NN	—	0	0	—	NN
Wisconsin	—	0	0	—	NN	—	0	0	—	NN
W.N. Central	—	0	0	—	NN	—	0	0	—	NN
Iowa	—	0	0	—	NN	—	0	0	—	NN
Kansas	—	0	0	—	NN	—	0	0	—	NN
Minnesota	—	0	0	—	NN	—	0	0	—	NN
Missouri	—	0	0	—	NN	—	0	0	—	NN
Nebraska§	—	0	0	—	NN	—	0	0	—	NN
North Dakota	—	0	0	—	NN	—	0	0	—	NN
South Dakota	—	0	0	—	NN	—	0	0	—	NN
S. Atlantic	—	0	0	—	NN	—	0	0	—	NN
Delaware	—	0	0	—	NN	—	0	0	—	NN
District of Columbia	—	0	0	—	NN	—	0	0	—	NN
Florida	—	0	0	—	NN	—	0	0	—	NN
Georgia	—	0	0	—	NN	—	0	0	—	NN
Maryland§	—	0	0	—	NN	—	0	0	—	NN
North Carolina	—	0	0	—	NN	—	0	0	—	NN
South Carolina§	—	0	0	—	NN	—	0	0	—	NN
Virginia§	—	0	0	—	NN	—	0	0	—	NN
West Virginia	—	0	0	—	NN	—	0	0	—	NN
E.S. Central	—	0	0	—	NN	—	0	0	—	NN
Alabama§	—	0	0	—	NN	—	0	0	—	NN
Kentucky	—	0	0	—	NN	—	0	0	—	NN
Mississippi	—	0	0	—	NN	—	0	0	—	NN
Tennessee§	—	0	0	—	NN	—	0	0	—	NN
W.S. Central	—	0	0	—	NN	—	0	0	—	NN
Arkansas§	—	0	0	—	NN	—	0	0	—	NN
Louisiana	—	0	0	—	NN	—	0	0	—	NN
Oklahoma	—	0	0	—	NN	—	0	0	—	NN
Texas§	—	0	0	—	NN	—	0	0	—	NN
Mountain	—	0	0	—	NN	—	0	0	—	NN
Arizona	—	0	0	—	NN	—	0	0	—	NN
Colorado	—	0	0	—	NN	—	0	0	—	NN
Idaho§	—	0	0	—	NN	—	0	0	—	NN
Montana§	—	0	0	—	NN	—	0	0	—	NN
Nevada§	—	0	0	—	NN	—	0	0	—	NN
New Mexico§	—	0	0	—	NN	—	0	0	—	NN
Utah	—	0	0	—	NN	—	0	0	—	NN
Wyoming§	—	0	0	—	NN	—	0	0	—	NN
Pacific	—	0	2	2	NN	—	0	0	—	NN
Alaska	—	0	0	—	NN	—	0	0	—	NN
California	—	0	0	—	NN	—	0	0	—	NN
Hawaii	—	0	0	—	NN	—	0	0	—	NN
Oregon	—	0	0	—	NN	—	0	0	—	NN
Washington	—	0	2	2	NN	—	0	0	—	NN
American Samoa	—	0	0	—	NN	—	0	0	—	NN
C.N.M.I.	—	—	—	—	NN	—	—	—	—	NN
Guam	—	0	0	—	NN	—	0	0	—	NN
Puerto Rico	—	0	0	—	NN	—	0	0	—	NN
U.S. Virgin Islands	—	0	0	—	NN	—	0	0	—	NN

C.N.M.I.: Commonwealth of Northern Mariana Islands.
U: Unavailable. —: No reported cases. N: Not reportable. NN: Not Nationally Notifiable. Cum: Cumulative year-to-date counts. Med: Median. Max: Maximum.
* Incidence data for reporting years 2009 and 2010 are provisional.
† DHF includes cases that meet criteria for dengue shock syndrome (DSS), a more severe form of DHF.
§ Contains data reported through the National Electronic Disease Surveillance System (NEDSS).

TABLE II. (*Continued*) Provisional cases of selected notifiable diseases, United States, weeks ending February 27, 2010, and February 28, 2009 (8th week)*

Reporting area	Ehrlichiosis/Anaplasmosis†														
	Ehrlichia chaffeensis					*Anaplasma phagocytophilum*					Undetermined				
	Current week	Previous 52 weeks		Cum 2010	Cum 2009	Current week	Previous 52 weeks		Cum 2010	Cum 2009	Current week	Previous 52 weeks		Cum 2010	Cum 2009
		Med	Max				Med	Max				Med	Max		
United States	—	11	63	12	18	1	13	56	8	7	—	2	13	1	1
New England	—	0	4	1	1	—	1	21	4	3	—	0	2	—	—
Connecticut	—	0	0	—	—	—	0	1	—	—	—	0	0	—	—
Maine§	—	0	1	1	—	—	0	3	2	—	—	0	0	—	—
Massachusetts	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—
New Hampshire	—	0	1	—	—	—	0	3	—	1	—	0	1	—	—
Rhode Island§	—	0	4	—	1	—	0	20	2	2	—	0	1	—	—
Vermont§	—	0	1	—	—	—	0	0	—	—	—	0	0	—	—
Mid. Atlantic	—	2	17	1	1	—	3	22	1	—	—	0	2	—	—
New Jersey	—	0	1	—	—	—	0	0	—	—	—	0	0	—	—
New York (Upstate)	—	1	17	—	—	—	3	21	1	—	—	0	1	—	—
New York City	—	0	3	—	1	—	0	1	—	—	—	0	2	—	—
Pennsylvania	—	0	1	1	—	—	0	0	—	—	—	0	0	—	—
E.N. Central	—	1	8	—	—	—	3	22	1	—	—	1	9	—	—
Illinois	—	0	4	—	—	—	0	1	—	—	—	0	1	—	—
Indiana	—	0	0	—	—	—	0	0	—	—	—	0	8	—	—
Michigan	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—
Ohio	—	0	2	—	—	—	0	1	—	—	—	0	1	—	—
Wisconsin	—	0	5	—	—	—	3	22	1	—	—	0	3	—	—
W.N. Central	—	2	23	1	1	—	0	38	—	—	—	0	5	1	—
Iowa	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—
Kansas	—	0	2	—	—	—	0	0	—	—	—	0	0	—	—
Minnesota	—	0	3	—	1	—	0	38	—	—	—	0	5	—	—
Missouri	—	1	22	1	—	—	0	1	—	—	—	0	3	1	—
Nebraska§	—	0	1	—	—	—	0	1	—	—	—	0	0	—	—
North Dakota	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—
South Dakota	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—
S. Atlantic	—	3	24	8	13	1	0	2	2	3	—	0	2	—	—
Delaware	—	0	2	1	1	—	0	1	—	—	—	0	0	—	—
District of Columbia	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—
Florida	—	0	1	1	1	—	0	1	—	—	—	0	0	—	—
Georgia	—	0	2	2	3	—	0	1	1	1	—	0	0	—	—
Maryland§	—	1	4	4	4	—	0	1	—	1	—	0	1	—	—
North Carolina	—	0	4	—	4	1	0	1	1	1	—	0	0	—	—
South Carolina§	—	0	1	—	—	—	0	0	—	—	—	0	0	—	—
Virginia§	—	0	14	—	—	—	0	1	—	—	—	0	2	—	—
West Virginia	—	0	1	—	—	—	0	0	—	—	—	0	0	—	—
E.S. Central	—	1	11	—	2	—	0	1	—	1	—	0	5	—	1
Alabama§	—	0	3	—	—	—	0	1	—	—	—	0	0	—	—
Kentucky	—	0	2	—	—	—	0	0	—	—	—	0	1	—	—
Mississippi	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—
Tennessee§	—	1	10	—	2	—	0	1	—	1	—	0	5	—	1
W.S. Central	—	0	9	1	—	—	0	1	—	—	—	0	0	—	—
Arkansas§	—	0	5	—	—	—	0	0	—	—	—	0	0	—	—
Louisiana	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—
Oklahoma	—	0	8	—	—	—	0	1	—	—	—	0	0	—	—
Texas§	—	0	1	1	—	—	0	1	—	—	—	0	0	—	—
Mountain	—	0	0	—	—	—	0	0	—	—	—	0	1	—	—
Arizona	—	0	0	—	—	—	0	0	—	—	—	0	1	—	—
Colorado	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—
Idaho§	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—
Montana§	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—
Nevada§	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—
New Mexico§	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—
Utah	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—
Wyoming§	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—
Pacific	—	0	1	—	—	—	0	0	—	—	—	0	0	—	—
Alaska	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—
California	—	0	1	—	—	—	0	0	—	—	—	0	0	—	—
Hawaii	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—
Oregon	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—
Washington	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—
American Samoa	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—
C.N.M.I.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Guam	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—
Puerto Rico	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—
U.S. Virgin Islands	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—

C.N.M.I.: Commonwealth of Northern Mariana Islands.
U: Unavailable. —: No reported cases. N: Not reportable. NN: Not Nationally Notifiable. Cum: Cumulative year-to-date counts. Med: Median. Max: Maximum.
* Incidence data for reporting years 2009 and 2010 are provisional.
† Cumulative total *E. ewingii* cases reported as of this week = 0.
§ Contains data reported through the National Electronic Disease Surveillance System (NEDSS).

TABLE II. (*Continued*) Provisional cases of selected notifiable diseases, United States, weeks ending February 27, 2010, and February 28, 2009 (8th week)*

Reporting area	Giardiasis					Gonorrhea					*Haemophilus influenzae*, invasive† All ages, all serotypes				
	Current week	Previous 52 weeks		Cum 2010	Cum 2009	Current week	Previous 52 weeks		Cum 2010	Cum 2009	Current week	Previous 52 weeks		Cum 2010	Cum 2009
		Med	Max				Med	Max				Med	Max		
United States	204	325	539	1,882	2,307	2,504	5,465	6,886	31,333	47,687	33	54	131	378	534
New England	4	30	64	72	199	82	95	174	656	786	—	3	12	7	26
Connecticut	—	5	15	6	40	38	47	106	245	341	—	0	9	—	5
Maine§	2	4	13	25	31	4	3	11	42	15	—	0	2	1	2
Massachusetts	—	13	36	—	79	39	38	81	305	365	—	2	8	—	15
New Hampshire	1	3	12	16	17	1	2	6	21	16	—	0	2	4	3
Rhode Island§	—	1	6	2	11	—	6	19	37	43	—	0	2	2	—
Vermont§	1	4	14	23	21	—	1	5	6	6	—	0	1	—	1
Mid. Atlantic	36	62	100	337	434	709	590	840	4,753	4,724	10	12	26	103	91
New Jersey	—	1	12	—	72	128	86	124	652	738	—	2	7	6	14
New York (Upstate)	30	25	78	153	141	85	101	353	655	764	6	3	18	31	24
New York City	2	15	26	89	132	417	213	371	1,984	1,651	—	2	11	16	12
Pennsylvania	4	16	35	95	89	79	195	275	1,462	1,571	4	4	10	50	41
E.N. Central	13	45	74	286	341	201	1,057	1,342	4,079	10,079	2	11	29	52	138
Illinois	—	10	21	35	76	—	329	382	47	3,102	—	3	9	10	28
Indiana	N	0	0	N	N	—	123	209	227	1,211	—	1	5	5	16
Michigan	1	12	24	75	89	110	261	501	2,338	2,530	1	0	3	1	3
Ohio	9	16	28	127	114	44	228	353	894	2,361	—	2	6	23	21
Wisconsin	3	9	19	49	62	47	93	146	573	875	1	3	21	13	70
W.N. Central	8	25	155	147	170	97	273	361	1,412	2,421	—	2	21	16	27
Iowa	4	5	15	39	42	4	31	46	78	252	—	0	0	—	—
Kansas	—	3	14	29	20	4	41	85	217	392	—	0	2	3	5
Minnesota	—	0	135	—	1	—	43	64	71	366	—	0	17	—	5
Missouri	3	9	27	47	65	89	122	172	917	1,108	—	1	6	10	10
Nebraska§	1	3	9	26	25	—	23	54	121	223	—	0	3	1	6
North Dakota	—	0	8	—	2	—	2	14	8	13	—	0	2	2	1
South Dakota	—	1	5	6	15	—	3	14	—	67	—	0	0	—	—
S. Atlantic	71	68	107	469	566	630	1,347	1,788	6,425	11,266	7	12	31	85	129
Delaware	3	0	3	7	4	31	18	37	147	156	—	0	1	1	—
District of Columbia	—	0	2	—	12	—	47	88	251	467	—	0	1	—	—
Florida	30	37	59	252	274	156	407	476	2,746	3,345	4	4	10	26	42
Georgia	29	10	67	100	164	—	228	415	20	2,108	2	3	9	35	25
Maryland§	2	5	12	35	41	104	120	242	666	843	1	1	6	7	17
North Carolina	N	0	0	N	N	—	225	377	—	2,230	—	0	17	—	13
South Carolina§	1	2	8	13	14	176	160	412	1,247	1,121	—	1	7	15	6
Virginia§	6	8	23	58	51	161	156	272	1,294	892	—	0	3	—	16
West Virginia	—	1	5	4	6	2	9	18	54	104	—	0	4	1	10
E.S. Central	2	7	22	33	60	302	473	649	2,990	4,278	—	3	12	23	32
Alabama§	—	4	13	15	34	4	134	187	692	1,179	—	1	4	2	6
Kentucky	N	0	0	N	N	142	60	156	513	573	—	0	5	2	4
Mississippi	N	0	0	N	N	—	134	249	668	1,168	—	0	2	3	3
Tennessee§	2	4	18	18	26	156	153	220	1,117	1,358	—	2	10	16	19
W.S. Central	4	7	19	31	45	161	898	1,553	6,234	7,480	9	2	8	16	16
Arkansas§	1	3	9	15	8	98	84	139	607	741	1	0	3	2	3
Louisiana	—	0	7	—	29	—	165	343	910	1,670	—	0	1	—	4
Oklahoma	3	3	10	16	8	63	63	613	761	392	7	1	5	13	9
Texas§	N	0	0	N	N	—	560	917	3,956	4,677	1	0	2	1	—
Mountain	20	27	61	187	188	50	165	239	959	1,469	5	5	13	61	52
Arizona	—	4	7	19	23	12	57	93	316	432	3	1	10	23	24
Colorado	12	9	26	100	60	—	39	99	254	453	2	1	6	16	13
Idaho§	8	3	10	31	20	—	1	8	6	20	—	0	1	2	1
Montana§	—	2	11	8	17	1	1	5	17	11	—	0	1	—	1
Nevada§	—	1	10	5	4	37	26	94	243	341	—	0	2	4	3
New Mexico§	—	1	8	4	16	—	21	36	100	145	—	1	5	9	4
Utah	—	5	13	11	38	—	5	13	21	59	—	1	2	2	6
Wyoming§	—	1	5	9	10	—	1	7	2	8	—	0	2	5	—
Pacific	46	52	145	320	304	272	534	638	3,825	5,184	—	3	9	15	23
Alaska	—	2	7	7	7	—	19	32	149	134	—	0	3	5	3
California	32	34	60	218	228	272	439	531	3,254	4,328	—	0	4	—	8
Hawaii	—	0	2	—	3	—	12	24	72	90	—	0	5	—	6
Oregon	4	8	18	60	43	—	19	44	106	192	—	1	4	8	6
Washington	10	7	92	35	23	—	40	64	244	440	—	0	4	2	—
American Samoa	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—
C.N.M.I.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Guam	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—
Puerto Rico	—	1	10	1	21	6	4	24	37	28	—	0	1	1	—
U.S. Virgin Islands	—	0	0	—	—	—	2	7	5	12	N	0	0	N	N

C.N.M.I.: Commonwealth of Northern Mariana Islands.
U: Unavailable. —: No reported cases. N: Not reportable. NN: Not Nationally Notifiable. Cum: Cumulative year-to-date counts. Med: Median. Max: Maximum.
* Incidence data for reporting years 2009 and 2010 are provisional.
† Data for *H. influenzae* (age <5 yrs for serotype b, nonserotype b, and unknown serotype) are available in Table I.
§ Contains data reported through the National Electronic Disease Surveillance System (NEDSS).

TABLE II. (*Continued*) Provisional cases of selected notifiable diseases, United States, weeks ending February 27, 2010, and February 28, 2009 (8th week)*

Reporting area	Hepatitis (viral, acute), by type														
	A					B					C				
	Current week	Previous 52 weeks		Cum 2010	Cum 2009	Current week	Previous 52 weeks		Cum 2010	Cum 2009	Current week	Previous 52 weeks		Cum 2010	Cum 2009
		Med	Max				Med	Max				Med	Max		
United States	17	34	56	173	296	27	59	89	297	567	12	17	38	76	122
New England	—	2	5	8	14	—	1	3	4	8	—	1	5	2	9
Connecticut	—	0	2	7	3	—	0	3	3	3	—	1	4	2	6
Maine†	—	0	1	1	1	—	0	2	1	1	—	0	2	—	—
Massachusetts	—	1	4	—	9	—	0	2	—	3	—	0	1	—	2
New Hampshire	—	0	1	—	1	—	0	1	—	1	—	0	0	—	—
Rhode Island†	—	0	1	—	—	—	0	0	—	—	—	0	0	—	—
Vermont†	—	0	1	—	—	—	0	0	—	—	—	0	0	—	1
Mid. Atlantic	3	4	10	24	41	—	5	16	22	62	2	2	7	9	15
New Jersey	—	0	5	2	14	—	1	6	—	14	—	0	1	—	1
New York (Upstate)	2	1	3	5	6	—	1	6	6	13	2	1	4	7	5
New York City	—	2	5	10	11	—	1	5	9	10	—	0	0	—	—
Pennsylvania	1	1	6	7	10	—	2	6	7	25	—	0	4	2	9
E.N. Central	—	4	19	19	51	—	6	14	34	102	4	3	14	14	30
Illinois	—	2	13	—	20	—	1	6	—	20	—	0	1	—	3
Indiana	—	0	4	—	3	—	1	5	7	16	—	0	4	—	2
Michigan	—	1	4	6	12	—	2	6	12	23	3	3	12	13	14
Ohio	—	0	4	8	10	—	1	5	15	34	1	0	4	1	10
Wisconsin	—	0	2	5	6	—	0	4	—	9	—	0	2	—	1
W.N. Central	—	2	7	7	13	—	3	10	21	26	—	1	7	4	2
Iowa	—	0	3	3	—	—	0	3	3	6	—	0	4	—	—
Kansas	—	0	2	3	1	—	0	2	—	1	—	0	1	—	—
Minnesota	—	0	4	—	2	—	0	9	—	2	—	0	6	—	—
Missouri	—	0	3	1	6	—	2	5	14	11	—	0	2	3	1
Nebraska†	—	0	3	—	4	—	0	2	4	5	—	0	1	—	1
North Dakota	—	0	1	—	—	—	0	0	—	—	—	0	1	—	—
South Dakota	—	0	1	—	—	—	0	1	—	1	—	0	1	1	—
S. Atlantic	6	8	14	39	64	18	15	32	105	178	2	3	12	15	22
Delaware	—	0	1	1	—	U	0	0	U	U	U	0	0	U	U
District of Columbia	U	0	0	U	U	U	0	0	U	U	U	0	0	U	U
Florida	3	3	9	21	35	7	5	13	49	51	1	1	4	8	2
Georgia	1	1	3	6	10	1	3	7	27	33	—	0	3	1	5
Maryland†	1	0	3	2	7	5	1	4	9	24	—	1	3	3	4
North Carolina	—	0	7	—	6	—	0	19	2	55	—	0	10	—	4
South Carolina†	—	1	4	6	3	2	1	4	4	1	—	0	1	—	—
Virginia†	1	1	3	3	3	1	1	7	8	11	—	0	2	2	4
West Virginia	—	0	2	—	—	2	0	19	6	3	1	0	2	1	3
E.S. Central	—	1	3	5	8	1	7	13	46	61	1	2	5	15	18
Alabama†	—	0	2	2	1	—	1	5	12	19	—	0	2	1	1
Kentucky	—	0	2	1	1	1	2	6	19	10	1	1	5	13	10
Mississippi	—	0	1	—	3	—	0	2	—	4	—	0	0	—	—
Tennessee†	—	0	2	2	3	—	3	6	15	28	—	0	3	1	7
W.S. Central	4	3	14	14	28	2	9	18	17	63	—	1	6	3	5
Arkansas†	—	0	1	—	3	—	1	4	—	4	—	0	1	—	1
Louisiana	—	0	1	—	1	—	0	4	—	9	—	0	1	—	—
Oklahoma	1	0	3	1	1	—	2	8	3	9	—	0	4	1	—
Texas†	3	3	14	13	23	2	6	12	14	41	—	0	4	2	4
Mountain	3	3	7	28	21	—	2	6	7	30	2	1	4	5	11
Arizona	2	1	5	20	11	—	0	3	1	12	—	0	0	—	—
Colorado	1	1	5	5	4	—	0	2	1	6	—	0	3	—	7
Idaho†	—	0	1	2	—	—	0	2	1	1	2	0	1	3	—
Montana†	—	0	1	—	2	—	0	0	—	—	—	0	0	—	—
Nevada†	—	0	2	1	—	—	0	3	4	4	—	0	1	—	—
New Mexico†	—	0	1	—	1	—	0	1	—	4	—	0	2	—	4
Utah	—	0	2	—	3	—	0	1	—	3	—	0	2	2	—
Wyoming†	—	0	1	—	—	—	0	2	—	—	—	0	0	—	—
Pacific	1	5	16	29	56	6	6	25	41	37	1	1	5	9	10
Alaska	—	0	1	—	1	—	0	1	1	—	—	0	2	—	—
California	1	4	15	25	48	3	4	17	32	30	—	1	4	4	7
Hawaii	—	0	2	—	1	—	0	1	—	1	—	0	0	—	—
Oregon	—	0	2	2	3	—	1	4	5	4	—	0	3	4	2
Washington	—	1	3	2	3	3	0	8	3	2	1	0	5	1	1
American Samoa	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—
C.N.M.I.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Guam	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—
Puerto Rico	—	0	2	2	6	1	0	5	1	1	—	0	0	—	—
U.S. Virgin Islands	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—

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U: Unavailable. —: No reported cases. N: Not reportable. NN: Not Nationally Notifiable. Cum: Cumulative year-to-date counts. Med: Median. Max: Maximum.
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† Contains data reported through the National Electronic Disease Surveillance System (NEDSS).

TABLE II. (*Continued*) Provisional cases of selected notifiable diseases, United States, weeks ending February 27, 2010, and February 28, 2009 (8th week)*

Reporting area	Legionellosis					Lyme disease					Malaria				
	Current week	Previous 52 weeks		Cum 2010	Cum 2009	Current week	Previous 52 weeks		Cum 2010	Cum 2009	Current week	Previous 52 weeks		Cum 2010	Cum 2009
		Med	Max				Med	Max				Med	Max		
United States	17	56	163	239	264	51	366	2,004	765	1,184	10	21	48	146	150
New England	—	2	18	6	10	6	72	493	30	197	—	1	4	—	9
Connecticut	—	1	5	3	4	—	0	0	—	—	—	0	3	—	—
Maine†	—	0	3	—	—	6	11	76	22	12	—	0	1	—	—
Massachusetts	—	1	9	—	5	—	29	328	—	114	—	0	3	—	8
New Hampshire	—	0	2	1	—	—	19	93	3	54	—	0	1	—	—
Rhode Island†	—	0	4	1	—	—	1	28	—	1	—	0	1	—	—
Vermont†	—	0	1	1	1	—	5	42	5	16	—	0	1	—	1
Mid. Atlantic	2	16	69	48	67	35	190	1,102	426	531	1	6	13	39	28
New Jersey	—	2	13	—	9	—	37	378	17	203	—	0	1	—	—
New York (Upstate)	1	5	29	20	20	26	52	331	108	99	1	1	4	12	7
New York City	—	3	20	8	3	—	2	25	—	11	—	4	11	21	16
Pennsylvania	1	6	25	20	35	9	101	642	301	218	—	1	4	6	5
E.N. Central	5	10	38	43	62	1	23	223	50	68	4	2	11	12	20
Illinois	—	1	10	1	4	—	1	11	—	1	—	1	5	4	7
Indiana	—	1	4	2	8	—	1	7	4	2	—	0	4	1	5
Michigan	—	2	11	7	12	—	1	10	2	1	—	0	3	2	2
Ohio	5	4	17	31	32	1	1	5	3	2	4	0	6	5	6
Wisconsin	—	1	5	2	6	—	20	205	41	62	—	0	1	—	—
W.N. Central	—	2	12	5	4	—	5	150	1	13	—	1	8	9	7
Iowa	—	0	2	—	2	—	0	14	—	4	—	0	1	1	2
Kansas	—	0	1	—	2	—	0	2	—	4	—	0	1	3	1
Minnesota	—	0	11	1	—	—	0	150	—	4	—	0	8	—	1
Missouri	—	1	5	2	—	—	0	1	—	—	—	0	2	2	3
Nebraska†	—	0	2	2	—	—	0	3	1	—	—	0	2	3	—
North Dakota	—	0	1	—	—	—	0	0	—	—	—	0	1	—	—
South Dakota	—	0	1	—	—	—	0	0	—	1	—	0	1	—	—
S. Atlantic	6	11	22	55	59	8	62	245	221	348	4	6	16	46	57
Delaware	—	0	5	3	—	—	13	65	62	69	—	0	1	1	1
District of Columbia	—	0	2	—	1	—	0	5	—	2	—	0	2	1	2
Florida	3	4	10	25	21	—	2	11	11	6	4	2	7	24	15
Georgia	—	1	4	4	13	—	1	5	1	11	—	1	5	2	8
Maryland†	1	3	12	12	10	7	27	130	99	216	—	1	13	9	18
North Carolina	—	0	5	—	12	—	0	14	—	7	—	0	3	—	8
South Carolina†	—	0	2	1	—	—	0	3	1	3	—	0	1	—	1
Virginia†	2	1	5	9	2	1	10	65	39	30	—	1	5	9	4
West Virginia	—	0	2	1	—	—	0	33	8	4	—	0	2	—	—
E.S. Central	—	2	12	12	16	—	1	4	6	3	—	0	3	3	6
Alabama†	—	0	2	1	2	—	0	1	—	—	—	0	3	1	1
Kentucky	—	1	3	5	6	—	0	1	1	—	—	0	3	2	—
Mississippi	—	0	2	—	—	—	0	0	—	—	—	0	1	—	—
Tennessee†	—	1	9	6	8	—	1	4	5	3	—	0	2	—	5
W.S. Central	—	2	7	7	5	—	4	23	—	2	—	1	12	15	4
Arkansas†	—	0	1	—	—	—	0	0	—	—	—	0	1	1	—
Louisiana	—	0	2	—	1	—	0	0	—	—	—	0	1	—	1
Oklahoma	—	0	2	—	—	—	0	0	—	—	—	0	1	1	—
Texas†	—	2	6	7	4	—	4	23	—	2	—	1	12	13	3
Mountain	—	3	8	14	18	—	1	4	3	2	—	0	6	4	3
Arizona	—	1	4	8	6	—	0	1	—	—	—	0	2	1	—
Colorado	—	0	4	2	2	—	0	1	1	—	—	0	3	—	1
Idaho†	—	0	2	—	1	—	0	3	1	1	—	0	1	—	—
Montana†	—	0	1	1	2	—	0	1	—	—	—	0	3	—	—
Nevada†	—	0	1	2	3	—	0	1	—	—	—	0	1	1	—
New Mexico†	—	0	2	1	—	—	0	1	—	—	—	0	0	—	—
Utah	—	0	4	—	4	—	0	1	1	1	—	0	1	2	2
Wyoming†	—	0	2	—	—	—	0	1	—	—	—	0	0	—	—
Pacific	4	3	19	49	23	1	3	10	28	20	1	2	17	18	16
Alaska	—	0	1	—	—	—	0	1	—	2	—	0	1	—	—
California	4	3	19	49	17	1	2	9	20	15	1	2	12	14	12
Hawaii	—	0	0	—	1	N	0	0	N	N	—	0	1	—	—
Oregon	—	0	2	—	3	—	1	4	8	3	—	0	2	—	2
Washington	—	0	4	—	2	—	0	3	—	—	—	0	4	4	2
American Samoa	N	0	0	N	N	N	0	0	N	N	—	0	0	—	—
C.N.M.I.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Guam	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—
Puerto Rico	—	0	1	—	—	N	0	0	N	N	—	0	1	1	1
U.S. Virgin Islands	—	0	0	—	—	N	0	0	N	N	—	0	0	—	—

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TABLE II. (*Continued*) Provisional cases of selected notifiable diseases, United States, weeks ending February 27, 2010, and February 28, 2009 (8th week)*

Reporting area	Meningococcal disease, invasive† All groups					Pertussis					Rabies, animal				
	Current week	Previous 52 weeks		Cum 2010	Cum 2009	Current week	Previous 52 weeks		Cum 2010	Cum 2009	Current week	Previous 52 weeks		Cum 2010	Cum 2009
		Med	Max				Med	Max				Med	Max		
United States	9	16	33	102	158	78	270	1,219	881	1,876	31	62	138	239	539
New England	—	0	2	—	8	1	10	24	5	106	9	6	24	31	35
Connecticut	—	0	2	—	—	—	1	4	—	5	9	1	22	14	14
Maine§	—	0	1	—	1	—	0	10	1	21	—	1	4	7	6
Massachusetts	—	0	2	—	5	—	6	16	—	64	—	0	0	—	—
New Hampshire	—	0	1	—	1	—	1	7	1	9	—	0	3	2	4
Rhode Island§	—	0	1	—	1	1	0	8	1	2	—	0	5	—	5
Vermont§	—	0	1	—	—	—	0	1	2	5	—	1	5	8	6
Mid. Atlantic	—	2	6	10	14	16	20	43	67	165	8	10	23	59	81
New Jersey	—	0	2	—	1	—	2	11	—	46	—	0	0	—	—
New York (Upstate)	—	0	3	2	—	12	5	29	29	21	8	8	22	49	35
New York City	—	0	2	4	4	—	0	11	—	4	—	0	7	10	—
Pennsylvania	—	1	3	4	9	4	9	29	38	94	—	0	16	—	46
E.N. Central	1	2	9	18	41	27	53	100	310	486	—	2	19	5	7
Illinois	—	0	4	3	10	—	11	29	24	120	—	1	9	1	1
Indiana	—	0	3	5	8	—	6	15	15	70	—	0	7	—	1
Michigan	—	0	5	2	4	6	13	40	92	101	—	1	6	2	5
Ohio	1	1	3	5	11	21	19	49	174	172	—	0	5	2	—
Wisconsin	—	0	1	3	8	—	2	12	5	23	N	0	0	N	N
W.N. Central	1	1	6	6	13	1	30	453	94	329	1	7	18	18	26
Iowa	—	0	2	1	1	—	3	10	14	32	—	0	3	—	3
Kansas	—	0	2	1	3	—	4	12	18	28	—	1	6	8	14
Minnesota	—	0	2	—	3	—	0	448	—	—	—	0	11	5	2
Missouri	1	0	3	4	6	1	16	47	48	225	—	1	5	1	1
Nebraska§	—	0	1	—	—	—	2	9	11	39	1	1	6	4	2
North Dakota	—	0	1	—	—	—	0	12	—	—	—	0	7	—	2
South Dakota	—	0	1	—	—	—	0	6	3	5	—	0	4	—	2
S. Atlantic	4	3	10	27	20	13	28	66	117	253	9	22	102	107	324
Delaware	—	0	1	1	—	—	0	2	—	4	—	0	0	—	—
District of Columbia	—	0	0	—	—	—	0	1	—	2	—	0	0	—	—
Florida	2	1	4	13	10	7	7	29	33	53	—	0	5	21	156
Georgia	—	0	2	2	2	4	4	22	28	34	—	0	72	—	61
Maryland§	1	0	1	1	1	1	3	8	21	14	7	7	15	38	38
North Carolina	—	0	10	—	4	—	0	21	—	102	N	0	4	N	N
South Carolina§	—	0	1	2	1	1	4	18	23	20	—	0	0	—	—
Virginia§	1	0	2	7	2	—	3	15	11	22	—	10	26	38	64
West Virginia	—	0	2	1	—	—	0	5	1	2	2	3	6	10	5
E.S. Central	1	0	4	5	2	5	13	30	89	120	—	1	6	—	26
Alabama§	—	0	2	1	—	—	5	19	21	20	—	0	0	—	—
Kentucky	—	0	1	2	—	—	3	15	35	61	—	1	2	—	12
Mississippi	—	0	1	1	—	—	1	6	3	14	—	0	1	—	—
Tennessee§	1	0	2	1	2	5	4	9	30	25	—	0	4	—	14
W.S. Central	—	1	8	5	19	1	64	585	69	144	—	0	13	—	4
Arkansas§	—	0	2	1	3	1	6	23	2	11	—	0	10	—	2
Louisiana	—	0	3	—	8	—	1	8	—	17	—	0	0	—	—
Oklahoma	—	0	2	3	1	—	0	32	—	6	—	0	13	—	2
Texas§	—	1	6	1	7	—	55	577	67	110	—	0	1	—	—
Mountain	—	1	4	5	14	5	16	34	84	181	—	1	6	3	16
Arizona	—	0	2	2	3	—	4	12	18	21	N	0	0	N	N
Colorado	—	0	3	1	4	4	4	10	17	42	—	0	0	—	—
Idaho§	—	0	1	—	3	1	1	19	36	15	—	0	0	—	—
Montana§	—	0	2	—	1	—	1	6	4	4	—	0	4	—	4
Nevada§	—	0	1	1	1	—	0	3	—	2	—	0	1	—	—
New Mexico§	—	0	1	1	1	—	1	5	9	24	—	0	2	—	6
Utah	—	0	1	—	1	—	2	10	—	71	—	0	2	—	—
Wyoming§	—	0	2	—	—	—	0	5	—	2	—	0	4	3	6
Pacific	2	3	13	26	27	9	23	43	46	92	4	4	13	16	20
Alaska	—	0	2	—	2	—	0	4	3	13	—	0	3	4	7
California	2	2	10	18	17	—	11	22	3	25	4	4	11	11	13
Hawaii	—	0	1	—	1	—	0	3	—	6	—	0	0	—	—
Oregon	—	1	6	7	4	1	4	13	28	39	—	0	3	1	—
Washington	—	0	6	1	3	8	5	28	12	9	—	0	0	—	—
American Samoa	—	0	0	—	—	—	0	0	—	—	N	0	0	N	N
C.N.M.I.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Guam	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—
Puerto Rico	—	0	0	—	—	—	0	1	—	—	2	1	3	9	7
U.S. Virgin Islands	—	0	0	—	—	—	0	0	—	—	N	0	0	N	N

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† Data for meningococcal disease, invasive caused by serogroups A, C, Y, and W-135; serogroup B; other serogroup; and unknown serogroup are available in Table I.
§ Contains data reported through the National Electronic Disease Surveillance System (NEDSS).

TABLE II. (*Continued*) Provisional cases of selected notifiable diseases, United States, weeks ending February 27, 2010, and February 28, 2009 (8th week)*

Reporting area	Salmonellosis					Shiga toxin-producing *E. coli* (STEC)†					Shigellosis				
	Current week	Previous 52 weeks		Cum 2010	Cum 2009	Current week	Previous 52 weeks		Cum 2010	Cum 2009	Current week	Previous 52 weeks		Cum 2010	Cum 2009
		Med	Max				Med	Max				Med	Max		
United States	256	888	1,365	3,127	5,009	7	81	150	196	458	132	273	494	1,378	2,334
New England	1	30	90	72	583	—	3	30	2	77	—	4	27	11	62
Connecticut	—	0	40	40	406	—	0	1	1	65	—	0	7	7	40
Maine§	1	2	7	7	14	—	0	3	—	—	—	0	2	1	2
Massachusetts	—	20	47	—	116	—	2	7	—	7	—	3	27	—	17
New Hampshire	—	3	44	12	22	—	1	3	1	5	—	0	4	2	1
Rhode Island§	—	2	11	12	16	—	0	26	—	—	—	0	7	1	2
Vermont§	—	1	5	1	9	—	0	3	—	—	—	0	1	—	—
Mid. Atlantic	18	90	206	355	528	2	6	21	22	34	17	49	87	233	462
New Jersey	—	13	46	7	85	—	0	4	—	9	—	6	27	9	158
New York (Upstate)	8	23	77	94	116	—	3	11	10	10	3	4	19	23	16
New York City	3	22	46	119	140	—	1	5	4	6	2	7	15	40	86
Pennsylvania	7	29	65	135	187	2	2	8	8	9	12	26	63	161	202
E.N. Central	26	89	152	291	711	1	13	36	26	97	4	40	78	104	581
Illinois	—	24	52	52	181	—	3	6	5	43	—	10	34	22	106
Indiana	—	5	19	—	44	—	1	8	—	6	—	0	5	—	15
Michigan	4	16	34	76	132	—	3	8	10	12	1	3	11	20	55
Ohio	20	24	52	129	210	1	2	11	5	12	3	14	46	50	322
Wisconsin	2	12	30	34	144	—	4	21	6	24	—	5	26	12	83
W.N. Central	10	47	86	193	313	1	12	39	35	39	41	29	86	406	79
Iowa	3	7	16	18	52	—	2	14	2	10	—	0	5	7	26
Kansas	1	6	22	26	39	—	1	5	4	2	—	3	13	17	27
Minnesota	—	11	30	45	69	—	2	19	10	11	—	1	7	5	10
Missouri	6	12	30	76	56	1	2	10	15	10	41	19	72	375	9
Nebraska§	—	5	41	19	47	—	1	6	4	6	—	0	3	2	6
North Dakota	—	0	21	2	5	—	0	3	—	—	—	0	2	—	—
South Dakota	—	1	22	7	45	—	0	12	—	—	—	0	1	—	1
S. Atlantic	94	276	453	1,159	1,252	—	12	22	41	75	24	42	79	218	361
Delaware	—	2	9	6	3	—	0	2	—	2	3	3	10	20	3
District of Columbia	—	0	2	3	10	—	0	0	—	1	—	0	2	1	3
Florida	67	133	278	582	518	—	3	7	15	25	11	9	18	81	82
Georgia	10	45	98	214	218	—	1	4	7	7	7	12	29	79	94
Maryland§	9	15	32	73	90	—	2	5	8	11	1	6	19	9	62
North Carolina	—	17	89	120	207	—	1	11	—	20	—	3	27	6	49
South Carolina§	5	16	67	64	93	—	0	3	—	2	1	2	8	11	31
Virginia§	3	20	47	84	99	—	2	7	11	6	1	3	8	11	33
West Virginia	—	4	23	13	14	—	0	5	—	1	—	0	2	—	4
E.S. Central	5	52	113	172	308	—	4	10	9	21	3	12	46	49	134
Alabama§	1	14	39	43	95	—	1	4	5	3	—	2	9	5	38
Kentucky	1	8	18	40	61	—	1	4	—	8	1	3	25	26	15
Mississippi	—	14	45	29	69	—	0	1	1	1	—	1	4	2	5
Tennessee§	3	14	33	60	83	—	1	8	3	9	2	5	16	16	76
W.S. Central	9	100	362	139	324	—	5	23	9	18	28	47	150	172	332
Arkansas§	3	10	25	19	54	—	1	4	4	5	1	5	14	8	31
Louisiana	—	5	43	—	57	—	0	0	—	—	—	1	7	—	41
Oklahoma	4	11	30	31	34	—	0	6	1	3	8	6	19	32	21
Texas§	2	57	343	89	179	—	4	23	4	10	19	31	124	132	239
Mountain	17	52	129	265	350	—	8	27	21	58	2	18	49	69	174
Arizona	2	18	50	90	140	—	1	4	4	1	1	13	42	36	117
Colorado	10	10	33	78	70	—	2	11	3	41	—	2	6	18	21
Idaho§	2	3	10	20	25	—	1	7	6	3	1	0	1	2	—
Montana§	—	1	7	19	17	—	0	7	1	1	—	0	5	1	—
Nevada§	—	3	11	13	23	—	0	3	1	1	—	1	7	1	14
New Mexico§	—	5	28	22	27	—	1	3	4	7	—	1	8	9	20
Utah	—	5	14	14	44	—	1	11	2	3	—	0	3	2	2
Wyoming§	3	1	9	9	4	—	0	2	—	1	—	0	1	—	—
Pacific	76	123	339	481	640	3	9	70	31	39	13	22	61	116	149
Alaska	—	1	7	8	8	—	0	0	—	—	—	0	2	—	1
California	65	93	200	391	504	2	4	23	21	34	13	18	40	106	125
Hawaii	—	5	61	—	41	—	0	2	—	1	—	0	4	—	6
Oregon	1	8	19	44	50	—	1	11	5	1	—	1	4	6	8
Washington	10	11	127	38	37	1	2	45	5	3	—	2	19	4	9
American Samoa	—	0	1	1	—	—	0	0	—	—	—	0	2	—	1
C.N.M.I.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Guam	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—
Puerto Rico	2	5	19	30	93	—	0	0	—	—	—	0	2	—	—
U.S. Virgin Islands	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—

C.N.M.I.: Commonwealth of Northern Mariana Islands.
U: Unavailable. —: No reported cases. N: Not reportable. NN: Not Nationally Notifiable. Cum: Cumulative year-to-date counts. Med: Median. Max: Maximum.
* Incidence data for reporting years 2009 and 2010 are provisional.
† Includes *E. coli* O157:H7; Shiga toxin-positive, serogroup non-O157; and Shiga toxin-positive, not serogrouped.
§ Contains data reported through the National Electronic Disease Surveillance System (NEDSS).

TABLE II. (*Continued*) Provisional cases of selected notifiable diseases, United States, weeks ending February 27, 2010, and February 28, 2009 (8th week)*

Reporting area	Spotted Fever Rickettsiosis (including RMSF)†									
	Confirmed					Probable				
	Current week	Previous 52 weeks		Cum 2010	Cum 2009	Current week	Previous 52 weeks		Cum 2010	Cum 2009
		Med	Max				Med	Max		
United States	1	1	9	6	5	—	20	74	26	114
New England	—	0	1	—	—	—	0	2	—	1
Connecticut	—	0	0	—	—	—	0	0	—	—
Maine§	—	0	0	—	—	—	0	2	—	1
Massachusetts	—	0	1	—	—	—	0	1	—	—
New Hampshire	—	0	0	—	—	—	0	1	—	—
Rhode Island§	—	0	0	—	—	—	0	0	—	—
Vermont§	—	0	1	—	—	—	0	0	—	—
Mid. Atlantic	—	0	3	—	—	—	1	6	—	3
New Jersey	—	0	0	—	—	—	0	0	—	—
New York (Upstate)	—	0	1	—	—	—	0	3	—	—
New York City	—	0	1	—	—	—	0	4	—	2
Pennsylvania	—	0	2	—	—	—	0	2	—	1
E.N. Central	—	0	2	—	1	—	1	7	—	3
Illinois	—	0	0	—	—	—	0	6	—	1
Indiana	—	0	2	—	—	—	0	2	—	—
Michigan	—	0	1	—	1	—	0	1	—	—
Ohio	—	0	0	—	—	—	0	4	—	2
Wisconsin	—	0	0	—	—	—	0	1	—	—
W.N. Central	—	0	3	—	—	—	3	27	2	1
Iowa	—	0	1	—	—	—	0	1	—	—
Kansas	—	0	1	—	—	—	0	0	—	—
Minnesota	—	0	1	—	—	—	0	1	—	—
Missouri	—	0	1	—	—	—	3	26	2	1
Nebraska§	—	0	2	—	—	—	0	1	—	—
North Dakota	—	0	0	—	—	—	0	0	—	—
South Dakota	—	0	0	—	—	—	0	0	—	—
S. Atlantic	—	1	9	4	3	—	5	26	16	95
Delaware	—	0	0	—	—	—	0	3	—	1
District of Columbia	—	0	0	—	—	—	0	0	—	—
Florida	—	0	1	—	—	—	0	2	—	1
Georgia	—	0	7	4	3	—	0	0	—	—
Maryland§	—	0	2	—	—	—	0	3	—	7
North Carolina	—	0	1	—	—	—	2	24	15	75
South Carolina§	—	0	1	—	—	—	0	4	1	4
Virginia§	—	0	1	—	—	—	0	5	—	6
West Virginia	—	0	0	—	—	—	0	1	—	1
E.S. Central	—	0	2	—	1	—	4	15	—	7
Alabama§	—	0	1	—	—	—	1	7	—	3
Kentucky	—	0	1	—	—	—	0	0	—	—
Mississippi	—	0	0	—	1	—	0	1	—	—
Tennessee§	—	0	2	—	—	—	2	14	—	4
W.S. Central	1	0	3	1	—	—	1	25	2	2
Arkansas§	—	0	0	—	—	—	0	14	—	1
Louisiana	—	0	0	—	—	—	0	1	—	—
Oklahoma	—	0	3	—	—	—	0	24	—	—
Texas§	1	0	1	1	—	—	0	8	2	1
Mountain	—	0	2	1	—	—	0	4	6	2
Arizona	—	0	1	1	—	—	0	4	6	—
Colorado	—	0	1	—	—	—	0	0	—	—
Idaho§	—	0	0	—	—	—	0	1	—	—
Montana§	—	0	1	—	—	—	0	1	—	—
Nevada§	—	0	0	—	—	—	0	0	—	—
New Mexico§	—	0	0	—	—	—	0	0	—	1
Utah	—	0	0	—	—	—	0	0	—	1
Wyoming§	—	0	1	—	—	—	0	1	—	—
Pacific	—	0	1	—	—	—	0	0	—	—
Alaska	—	0	0	—	—	—	0	0	—	—
California	—	0	1	—	—	—	0	0	—	—
Hawaii	—	0	0	—	—	—	0	0	—	—
Oregon	—	0	0	—	—	—	0	0	—	—
Washington	—	0	0	—	—	—	0	0	—	—
American Samoa	—	0	0	—	—	—	0	0	—	—
C.N.M.I.	—	—	—	—	—	—	—	—	—	—
Guam	—	0	0	—	—	—	0	0	—	—
Puerto Rico	—	0	0	—	—	—	0	0	—	—
U.S. Virgin Islands	—	0	0	—	—	—	0	0	—	—

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U: Unavailable. —: No reported cases. N: Not reportable. NN: Not Nationally Notifiable. Cum: Cumulative year-to-date counts. Med: Median. Max: Maximum.
* Incidence data for reporting years 2009 and 2010 are provisional.
† Illnesses with similar clinical presentation that result from Spotted fever group rickettsia infections are reported as Spotted fever rickettsioses. Rocky Mountain spotted fever (RMSF) caused by *Rickettsia rickettsii*, is the most common and well-known spotted fever.
§ Contains data reported through the National Electronic Disease Surveillance System (NEDSS).

TABLE II. (*Continued*) Provisional cases of selected notifiable diseases, United States, weeks ending February 27, 2010, and February 28, 2009 (8th week)*

Reporting area	*Streptococcus pneumoniae*,† invasive disease										Syphilis, primary and secondary				
	All ages					Age <5									
	Current week	Previous 52 weeks		Cum 2010	Cum 2009	Current week	Previous 52 weeks		Cum 2010	Cum 2009	Current week	Previous 52 weeks		Cum 2010	Cum 2009
		Med	Max				Med	Max				Med	Max		
United States	221	55	353	2,048	663	37	43	103	311	453	78	268	326	1,288	2,171
New England	3	1	50	65	15	—	1	23	5	10	5	6	21	53	49
Connecticut	—	0	50	—	—	—	0	22	—	—	3	1	9	11	6
Maine§	2	0	4	16	3	—	0	2	3	—	—	0	2	5	1
Massachusetts	—	0	1	—	—	—	0	5	—	7	2	4	12	28	36
New Hampshire	1	0	6	27	5	—	0	2	2	2	—	0	1	2	6
Rhode Island§	—	0	4	6	4	—	0	1	—	—	—	0	5	5	—
Vermont§	—	0	5	16	3	—	0	1	—	1	—	0	2	2	—
Mid. Atlantic	8	4	23	117	23	3	5	32	45	39	27	34	50	226	292
New Jersey	—	0	3	10	—	—	0	4	7	9	5	3	13	24	37
New York (Upstate)	4	2	18	34	9	3	2	17	25	23	3	2	9	11	11
New York City	—	0	1	—	1	—	0	14	—	4	19	20	39	152	196
Pennsylvania	4	2	19	73	13	—	0	5	13	3	—	6	14	39	48
E.N. Central	31	13	64	332	132	7	7	15	52	82	—	24	46	72	197
Illinois	—	0	0	—	—	—	1	4	—	13	—	11	33	3	108
Indiana	—	4	14	59	42	—	1	4	9	11	—	2	9	7	28
Michigan	7	0	26	102	6	1	1	4	15	13	—	4	13	33	30
Ohio	16	8	18	80	84	6	2	7	19	32	—	6	12	29	20
Wisconsin	8	0	20	91	—	—	1	3	9	13	—	0	3	—	11
W.N. Central	4	3	37	107	28	1	3	13	24	27	—	5	12	16	53
Iowa	—	0	0	—	—	—	0	0	—	—	—	0	2	—	5
Kansas	—	1	5	9	15	—	0	2	2	5	—	0	3	—	2
Minnesota	—	0	25	38	—	—	0	10	9	9	—	1	3	2	15
Missouri	3	1	8	28	12	1	0	5	10	10	—	3	8	14	30
Nebraska§	—	0	6	28	—	—	0	2	2	1	—	0	2	—	1
North Dakota	—	0	3	—	1	—	0	3	—	—	—	0	1	—	—
South Dakota	1	0	2	4	—	—	0	2	1	2	—	0	1	—	—
S. Atlantic	91	26	105	637	340	16	10	21	85	131	24	63	147	302	438
Delaware	—	0	2	3	3	—	0	2	—	—	—	0	3	—	6
District of Columbia	—	0	2	6	—	—	0	1	3	—	—	3	8	15	33
Florida	68	14	54	317	204	11	3	11	35	46	1	19	32	92	180
Georgia	6	8	19	93	116	2	3	8	24	42	—	14	98	18	51
Maryland§	8	0	18	86	2	1	1	7	8	15	5	6	12	25	37
North Carolina	—	0	0	—	—	—	0	0	—	—	8	9	31	85	77
South Carolina§	9	0	24	111	—	2	1	4	12	14	5	2	6	26	11
Virginia§	—	0	0	—	—	—	0	4	—	11	5	6	15	41	42
West Virginia	—	1	19	21	15	—	0	3	3	3	—	0	2	—	1
E.S. Central	23	4	48	197	73	1	2	10	19	32	8	20	37	99	194
Alabama§	—	0	0	—	—	—	0	0	—	—	1	7	18	23	74
Kentucky	2	1	5	13	19	—	0	2	1	4	2	1	13	14	12
Mississippi	—	0	4	7	2	—	0	2	2	5	—	4	12	9	25
Tennessee§	21	2	42	177	52	1	2	9	16	23	5	8	14	53	83
W.S. Central	26	1	41	203	21	4	6	34	36	58	8	48	74	272	413
Arkansas§	2	1	5	20	11	1	0	4	5	8	4	6	16	41	8
Louisiana	—	0	5	—	10	—	0	3	—	11	4	12	27	64	154
Oklahoma	1	0	5	13	—	1	1	5	13	8	—	1	6	7	16
Texas§	23	0	34	170	—	2	3	30	18	31	—	31	46	160	235
Mountain	32	2	74	354	29	5	5	12	40	66	2	7	18	37	80
Arizona	16	0	48	200	—	3	2	6	20	32	—	3	9	12	32
Colorado	16	0	20	109	—	2	1	4	12	12	—	1	5	13	18
Idaho§	—	0	1	2	—	—	0	2	1	1	—	0	1	—	1
Montana§	—	0	1	2	—	—	0	0	—	—	—	0	1	—	—
Nevada§	—	1	4	10	7	—	0	2	2	—	2	1	10	10	16
New Mexico§	—	0	7	27	—	—	0	4	4	5	—	1	5	2	10
Utah	—	1	4	1	18	—	1	6	1	16	—	0	2	—	3
Wyoming§	—	0	2	3	4	—	0	1	—	—	—	0	1	—	—
Pacific	3	0	9	36	2	—	0	2	5	8	4	43	63	211	455
Alaska	—	0	6	17	—	—	0	2	4	6	—	0	0	—	—
California	3	0	9	19	—	—	0	1	1	—	4	39	56	188	414
Hawaii	—	0	1	—	2	—	0	2	—	2	—	0	2	4	9
Oregon	—	0	0	—	—	—	0	0	—	—	—	1	5	6	6
Washington	—	0	0	—	—	—	0	0	—	—	—	2	7	13	26
American Samoa	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—
C.N.M.I.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Guam	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—
Puerto Rico	—	0	0	—	—	—	0	0	—	—	3	3	17	35	29
U.S. Virgin Islands	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—

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* Incidence data for reporting years 2009 and 2010 are provisional.
† Includes drug resistant and susceptible cases of invasive *Streptococcus pneumoniae* disease among children <5 years and among all ages. Case definition: Isolation of *S. pneumoniae* from a normally sterile body site (e.g., blood or cerebrospinal fluid).
§ Contains data reported through the National Electronic Disease Surveillance System (NEDSS).

TABLE II. (*Continued*) Provisional cases of selected notifiable diseases, United States, weeks ending February 27, 2010, and February 28, 2009 (8th week)*

Reporting area	Varicella (chickenpox)					West Nile virus disease†									
						Neuroinvasive					Nonneuroinvasive§				
	Current week	Previous 52 weeks		Cum 2010	Cum 2009	Current week	Previous 52 weeks		Cum 2010	Cum 2009	Current week	Previous 52 weeks		Cum 2010	Cum 2009
		Med	Max				Med	Max				Med	Max		
United States	119	267	665	1,446	4,065	—	1	45	1	—	—	0	48	—	—
New England	—	15	33	66	137	—	0	0	—	—	—	0	0	—	—
Connecticut	—	8	23	18	77	—	0	0	—	—	—	0	0	—	—
Maine¶	—	0	15	30	—	—	0	0	—	—	—	0	0	—	—
Massachusetts	—	0	2	—	—	—	0	0	—	—	—	0	0	—	—
New Hampshire	—	3	10	18	38	—	0	0	—	—	—	0	0	—	—
Rhode Island¶	—	0	1	—	2	—	0	0	—	—	—	0	0	—	—
Vermont¶	—	0	4	—	20	—	0	0	—	—	—	0	0	—	—
Mid. Atlantic	9	26	55	152	348	—	0	2	—	—	—	0	1	—	—
New Jersey	N	0	0	N	N	—	0	1	—	—	—	0	0	—	—
New York (Upstate)	N	0	0	N	N	—	0	1	—	—	—	0	1	—	—
New York City	—	0	0	—	—	—	0	1	—	—	—	0	0	—	—
Pennsylvania	9	26	55	152	348	—	0	0	—	—	—	0	0	—	—
E.N. Central	76	101	206	785	1,547	—	0	4	—	—	—	0	3	—	—
Illinois	—	26	73	147	388	—	0	3	—	—	—	0	0	—	—
Indiana	1	7	30	58	86	—	0	1	—	—	—	0	1	—	—
Michigan	28	35	84	263	453	—	0	1	—	—	—	0	0	—	—
Ohio	44	29	85	248	496	—	0	0	—	—	—	0	2	—	—
Wisconsin	3	8	57	69	124	—	0	1	—	—	—	0	0	—	—
W.N. Central	9	11	62	72	275	—	0	5	—	—	—	0	11	—	—
Iowa	N	0	0	N	N	—	0	0	—	—	—	0	1	—	—
Kansas	—	2	19	—	59	—	0	1	—	—	—	0	2	—	—
Minnesota	—	0	0	—	—	—	0	1	—	—	—	0	1	—	—
Missouri	9	7	51	62	190	—	0	2	—	—	—	0	1	—	—
Nebraska¶	N	0	0	N	N	—	0	2	—	—	—	0	6	—	—
North Dakota	—	0	26	8	23	—	0	0	—	—	—	0	1	—	—
South Dakota	—	0	2	2	3	—	0	3	—	—	—	0	2	—	—
S. Atlantic	25	23	109	225	447	—	0	4	—	—	—	0	1	—	—
Delaware	—	0	2	1	2	—	0	0	—	—	—	0	0	—	—
District of Columbia	—	0	3	—	4	—	0	0	—	—	—	0	0	—	—
Florida	20	14	61	147	249	—	0	1	—	—	—	0	1	—	—
Georgia	N	0	0	N	N	—	0	1	—	—	—	0	0	—	—
Maryland¶	N	0	0	N	N	—	0	0	—	—	—	0	1	—	—
North Carolina	N	0	0	N	N	—	0	0	—	—	—	0	0	—	—
South Carolina¶	—	0	54	—	90	—	0	2	—	—	—	0	0	—	—
Virginia¶	—	0	5	7	28	—	0	1	—	—	—	0	0	—	—
West Virginia	5	9	32	70	74	—	0	0	—	—	—	0	0	—	—
E.S. Central	—	7	29	15	92	—	0	6	1	—	—	0	4	—	—
Alabama¶	—	7	27	15	92	—	0	0	—	—	—	0	0	—	—
Kentucky	N	0	0	N	N	—	0	1	—	—	—	0	0	—	—
Mississippi	—	0	2	—	—	—	0	5	1	—	—	0	4	—	—
Tennessee¶	N	0	0	N	N	—	0	2	—	—	—	0	1	—	—
W.S. Central	—	68	261	29	795	—	0	17	—	—	—	0	6	—	—
Arkansas¶	—	0	23	—	39	—	0	1	—	—	—	0	0	—	—
Louisiana	—	0	7	—	13	—	0	2	—	—	—	0	4	—	—
Oklahoma	N	0	0	N	N	—	0	2	—	—	—	0	2	—	—
Texas¶	—	67	245	29	743	—	0	14	—	—	—	0	4	—	—
Mountain	—	18	62	99	390	—	0	12	—	—	—	0	17	—	—
Arizona	—	0	0	—	—	—	0	4	—	—	—	0	2	—	—
Colorado	—	8	33	50	141	—	0	7	—	—	—	0	14	—	—
Idaho¶	N	0	0	N	N	—	0	3	—	—	—	0	5	—	—
Montana¶	—	0	10	—	64	—	0	1	—	—	—	0	1	—	—
Nevada¶	N	0	0	N	N	—	0	2	—	—	—	0	1	—	—
New Mexico¶	—	0	12	8	56	—	0	2	—	—	—	0	1	—	—
Utah	—	8	32	41	129	—	0	1	—	—	—	0	1	—	—
Wyoming¶	—	0	0	—	—	—	0	1	—	—	—	0	2	—	—
Pacific	—	1	5	3	34	—	0	12	—	—	—	0	12	—	—
Alaska	—	0	4	3	22	—	0	0	—	—	—	0	0	—	—
California	—	0	0	—	—	—	0	8	—	—	—	0	6	—	—
Hawaii	—	0	4	—	12	—	0	0	—	—	—	0	0	—	—
Oregon	N	0	0	N	N	—	0	1	—	—	—	0	4	—	—
Washington	N	0	0	N	N	—	0	6	—	—	—	0	3	—	—
American Samoa	N	0	0	N	N	—	0	0	—	—	—	0	0	—	—
C.N.M.I.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Guam	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—
Puerto Rico	3	6	26	38	64	—	0	0	—	—	—	0	0	—	—
U.S. Virgin Islands	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—

C.N.M.I.: Commonwealth of Northern Mariana Islands.
U: Unavailable. —: No reported cases. N: Not reportable. NN: Not Nationally Notifiable. Cum: Cumulative year-to-date counts. Med: Median. Max: Maximum.
* Incidence data for reporting years 2009 and 2010 are provisional. Data for HIV/AIDS, AIDS, and TB, when available, are displayed in Table IV, which appears quarterly.
† Updated weekly from reports to the Division of Vector-Borne Infectious Diseases, National Center for Zoonotic, Vector-Borne, and Enteric Diseases (ArboNET Surveillance). Data for California serogroup, eastern equine, Powassan, St. Louis, and western equine diseases are available in Table I.
§ Not reportable in all states. Data from states where the condition is not reportable are excluded from this table, except starting in 2007 for the domestic arboviral diseases and influenza-associated pediatric mortality, and in 2003 for SARS-CoV. Reporting exceptions are available at http://www.cdc.gov/epo/dphsi/phs/infdis.htm.
¶ Contains data reported through the National Electronic Disease Surveillance System (NEDSS).

TABLE III. Deaths in 122 U.S. cities,* week ending February 27, 2010 (8th week)

Reporting area	All causes, by age (years)						P&I† Total
	All Ages	≥65	45–64	25–44	1–24	<1	
New England	574	394	125	27	6	18	59
Boston, MA	135	84	35	8	3	5	12
Bridgeport, CT	41	32	6	2	—	1	9
Cambridge, MA	25	18	3	—	—	—	6
Fall River, MA	20	15	5	—	—	—	3
Hartford, CT	68	44	18	4	1	1	7
Lowell, MA	31	21	8	2	—	—	1
Lynn, MA	14	7	5	1	—	1	—
New Bedford, MA	24	20	3	1	—	—	1
New Haven, CT	29	25	3	1	—	—	5
Providence, RI	63	45	14	2	2	—	4
Somerville, MA	4	2	2	—	—	—	—
Springfield, MA	39	26	4	—	—	9	2
Waterbury, CT	31	23	7	1	—	—	2
Worcester, MA	50	32	12	5	—	1	7
Mid. Atlantic	1,863	1,326	403	92	21	21	107
Albany, NY	47	32	10	3	—	2	5
Allentown, PA	27	21	5	1	—	—	2
Buffalo, NY	53	40	8	4	1	—	6
Camden, NJ	30	16	10	2	—	2	—
Elizabeth, NJ	11	7	3	1	—	—	3
Erie, PA	44	31	10	2	—	1	1
Jersey City, NJ	22	17	5	—	—	—	3
New York City, NY	1,119	799	244	57	12	7	50
Newark, NJ	21	11	9	1	—	—	1
Paterson, NJ	—	—	—	—	—	—	—
Philadelphia, PA	152	99	34	11	4	4	7
Pittsburgh, PA§	44	30	11	2	—	1	—
Reading, PA	34	27	7	—	—	—	1
Rochester, NY	89	63	19	1	3	3	8
Schenectady, NY	22	14	5	2	1	—	1
Scranton, PA	29	22	5	1	—	1	3
Syracuse, NY	58	51	6	1	—	—	12
Trenton, NJ	29	17	11	1	—	—	—
Utica, NY	11	10	—	1	—	—	2
Yonkers, NY	21	19	1	1	—	—	2
E.N. Central	2,174	1,437	523	119	43	52	158
Akron, OH	53	36	14	—	2	1	8
Canton, OH	49	34	10	4	1	—	7
Chicago, IL	310	191	83	19	10	7	10
Cincinnati, OH	97	61	27	4	3	2	10
Cleveland, OH	297	209	60	15	2	11	19
Columbus, OH	223	143	63	10	1	6	22
Dayton, OH	164	126	30	8	—	—	12
Detroit, MI	131	73	39	10	6	3	8
Evansville, IN	41	32	5	3	—	1	3
Fort Wayne, IN	64	45	15	4	—	—	2
Gary, IN	11	5	3	—	—	3	—
Grand Rapids, MI	57	43	10	4	—	—	6
Indianapolis, IN	232	134	62	18	11	7	17
Lansing, MI	37	31	5	1	—	—	3
Milwaukee, WI	75	44	22	5	3	1	9
Peoria, IL	53	35	13	3	—	2	5
Rockford, IL	70	45	17	5	3	—	5
South Bend, IN	31	23	7	1	—	—	1
Toledo, OH	119	83	26	4	1	5	6
Youngstown, OH	60	44	12	1	—	3	5
W.N. Central	588	412	119	24	18	15	39
Des Moines, IA	74	50	17	5	1	1	9
Duluth, MN	39	30	7	1	—	1	3
Kansas City, KS	34	20	7	4	3	—	1
Kansas City, MO	85	65	14	2	3	1	8
Lincoln, NE	32	26	6	—	—	—	2
Minneapolis, MN	57	34	19	1	—	3	4
Omaha, NE	118	90	23	2	2	1	7
St. Louis, MO	10	1	2	3	3	1	—
St. Paul, MN	62	39	15	—	2	6	1
Wichita, KS	77	57	9	6	4	1	4
S. Atlantic	1,199	783	307	56	34	19	83
Atlanta, GA	134	75	46	7	6	—	12
Baltimore, MD	171	101	51	9	6	4	20
Charlotte, NC	123	93	21	5	2	2	12
Jacksonville, FL	212	139	59	7	4	3	10
Miami, FL	146	109	24	5	8	—	7
Norfolk, VA	59	38	13	2	—	6	2
Richmond, VA	87	58	24	4	1	—	4
Savannah, GA	58	31	18	6	3	—	3
St. Petersburg, FL	41	30	8	—	1	2	1
Tampa, FL	155	99	41	11	3	1	9
Washington, D.C.	U	U	U	U	U	U	U
Wilmington, DE	13	10	2	—	—	1	3
E.S. Central	935	611	233	52	22	17	87
Birmingham, AL	188	123	45	8	7	5	20
Chattanooga, TN	90	57	23	7	1	2	10
Knoxville, TN	106	71	20	10	4	1	12
Lexington, KY	75	40	27	4	2	2	12
Memphis, TN	186	127	46	10	1	2	12
Mobile, AL	60	46	7	6	—	1	3
Montgomery, AL	62	44	15	1	2	—	5
Nashville, TN	168	103	50	6	5	4	13
W.S. Central	1,255	847	287	75	26	20	104
Austin, TX	92	66	22	4	—	—	6
Baton Rouge, LA	62	45	12	5	—	—	1
Corpus Christi, TX	71	45	22	3	—	1	14
Dallas, TX	242	154	60	16	7	5	21
El Paso, TX	54	41	6	5	2	—	—
Fort Worth, TX	U	U	U	U	U	U	U
Houston, TX	174	116	39	11	1	7	13
Little Rock, AR	70	44	15	7	2	2	8
New Orleans, LA	U	U	U	U	U	U	U
San Antonio, TX	277	190	64	16	6	1	21
Shreveport, LA	98	66	25	3	2	2	10
Tulsa, OK	115	80	22	5	6	2	10
Mountain	1,170	778	271	67	27	27	80
Albuquerque, NM	141	100	33	3	2	3	11
Boise, ID	56	44	6	4	2	—	3
Colorado Springs, CO	67	46	15	4	1	1	3
Denver, CO	86	50	20	9	3	4	3
Las Vegas, NV	290	185	81	17	3	4	18
Ogden, UT	40	26	9	1	1	3	5
Phoenix, AZ	184	118	39	15	6	6	11
Pueblo, CO	30	24	4	1	1	—	3
Salt Lake City, UT	124	81	30	4	6	3	16
Tucson, AZ	152	104	34	9	2	3	7
Pacific	1,884	1,305	417	96	34	32	193
Berkeley, CA	14	11	2	1	—	—	2
Fresno, CA	113	83	21	4	2	3	8
Glendale, CA	32	25	5	—	1	1	7
Honolulu, HI	92	61	22	7	1	1	12
Long Beach, CA	71	46	19	2	1	3	15
Los Angeles, CA	304	192	74	23	5	10	38
Pasadena, CA	28	22	4	1	1	—	5
Portland, OR	124	93	21	9	1	—	7
Sacramento, CA	229	155	58	10	5	1	21
San Diego, CA	169	133	24	6	3	3	13
San Francisco, CA	121	74	30	11	3	3	13
San Jose, CA	206	141	42	14	6	3	23
Santa Cruz, CA	20	16	4	—	—	—	3
Seattle, WA	117	74	35	2	3	3	5
Spokane, WA	64	47	14	2	—	1	6
Tacoma, WA	180	132	42	4	2	—	15
Total¶	11,642	7,893	2,685	608	231	221	910

U: Unavailable. —: No reported cases.

* Mortality data in this table are voluntarily reported from 122 cities in the United States, most of which have populations of >100,000. A death is reported by the place of its occurrence and by the week that the death certificate was filed. Fetal deaths are not included.

† Pneumonia and influenza.

§ Because of changes in reporting methods in this Pennsylvania city, these numbers are partial counts for the current week. Complete counts will be available in 4 to 6 weeks.

¶ Total includes unknown ages.

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